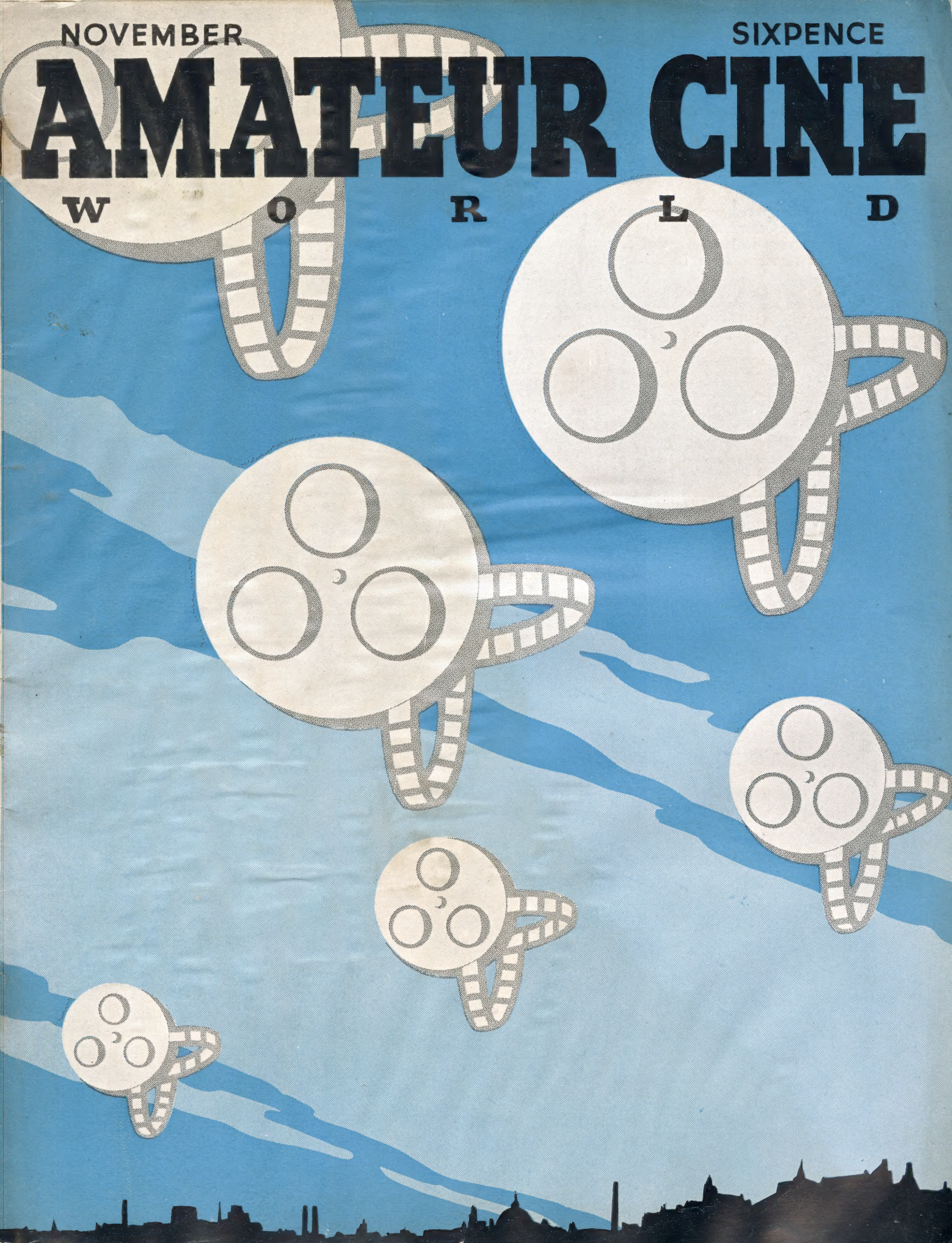
NOVEMBER

SIXPENCE

AMATEUR CINE WORLD



LONDON *CAN* SUPPLY

We want all our friends, throughout Britain, to know that we are carrying on in London. With a projector and some films you can entertain your family and friends in the black-out. The outlay is very reasonable. Call or write for fuller particulars. Below we quote many used bargains. Please remember LONDON CAN SUPPLY !

PROJECTORS

16 mm. Agfa Movector De Luxe Model, 3.5 Amp lamp, resistance, rewinds, case. Cost £45... **£22 10 0**

16mm. Bell & Howell "57," 200 watts lamp. (About 7 years old). Cost £85 ... ... **£25 10 0**

16mm. Kodascope Model "H," 250 watts lamp, resistance. Cost £45 ... ... **£16 10 0**

16mm. Kodascope "C" Bronze, 100 watts lamp, resistance. Cost £18 18 0 ... ... **£9 17 6**

16mm. Bell & Howell, 57G, oval base, 250 watts lamp, voltmeter, transformer, case. Cost £85 **£42 10 0**

16mm. Bell & Howell, 57 JJ, geared arms, 750 watt lamp, voltmeter, reverse, case. Cost £90 **£59 0 0**

16mm. Filmosound Talkie Model 120, complete. Cost £200 ... ... **£142 10 0**

9.5mm. Pathe 200B, with resistance ... **£12 10 0**

9.5 and 16mm. 200B Plus, with resistance, new lamp **£14 14 0**

8mm. Siemens "H8," 200 watts lamp, still picture device, reverse, etc. **£32 0 0**

8mm. Kodascope "Home," 200 watts lamp, case **£11 17 6**

For 9.5mm. and 16mm.

The Pathescope 200B Plus enables you to show either 9.5mm. or 16mm. films at will. It is an ideal projector for private use. The projector has a double gate and convertible sprockets, making a change-over in film size a matter of seconds only. The 200 watts lamp gives ample illumination and a resistance is supplied so that the projector can be used on all voltages from 100 to 250 A.C. or D.C.

£18 10 0

SCREENS

Glass Beaded 48 x 36 ... ... **£3 0 0**
" " 40 x 30 ... ... **£2 5 0**
" " 32 x 24 ... ... **£1 12 6**
Silver Surface 40 x 30 ... ... **£1 1 0**
" " 96 x 72 ... ... **£7 10 0**

EDITING SUNDRIES

Ensign Universal Splicer **£2 12 6**
Ensign Popular Splicer, 9.5mm. ... **15 0**
Paillard Tri-film rewind Arm **£1 1 0**
Ensign Rewind Board **£1 5 0**
Projector Gate Brush **1 0**
Projector Oil, per bottle **1 0**

We have a large selection of books on cinematography. We also stock lamps to suit every projector.

LONDON CINE CAMERA CO. LTD.

ST. STEPHEN'S HOUSE, VICTORIA EMBANKMENT, LONDON, S.W.1. *Abbey 1611*

(Please help to keep London's Trade Wheels turning)

YOUR COPIES OF "AMATEUR CINE WORLD"

WILL BE BOUND TO LAST

if you bind them as received into one of the specially constructed

SELF-BINDING CASES

These cases are very handsome productions, worthy additions to any bookshelf. The sides are in red, the spine in black with gold lettering. Very simple to use—each copy of A.C.W. you bind is slipped under one of the twelve cords inside the spine, and is held securely in place. The spring back allows the volume to open quite flat at any desired page.

PRICE **3/6** EACH

Postage extra.
Gt. Britain and Eire 6d.
—places abroad 2/-.

Order through newsagents, bookstalls or photo dealers or direct from A. C. Burt, Link House, 300-304, Gray's Inn Road, London, W.C.1.

THE BEST CINE SERVICE IN 'CRATER' LONDON

We decided on this heading for our advertisement merely to raise your smile. Actually it is considerably less than the whole truth. We have always endeavoured to offer the best service in the country, and believe we lead our Competitors by an even larger margin now. Although there are craters and demolished buildings around most of our shops, we, so far, have been fortunate. This is fortunate for you because it still gives you the opportunity to avail yourself of our fine services, detailed in brief below.

GOOD STOCKS STILL AVAILABLE. Talkie and Movie Projectors by Bell & Howell, Ensign, Universal, Dual and Triple models, Kodascope 8 and 16's, Pathe 9.5, Keystone 8, Siemens 16 or 9.5/16. In addition a good stock of used projectors overhauled and guaranteed. Send your requirements.

EXCHANGES. The highest possible allowances are given. We will take in part exchange projectors, still and cine cameras, enlargers, lenses, prism binoculars or accessories. Quotations without obligation—fair treatment, no quibbling.

5 DAYS' FREE APPROVAL for any used apparatus against full cash deposit. Satisfaction guaranteed.

THE BEST FILM LIBRARIES. Many years and much experience has gone into building these fine libraries. The largest selection—and all the latest films. All films carefully examined and sent out in perfect condition. First choice nearly always available—but our experts are well practised in making up programmes and customers who leave selection to us are always delighted. Lists include 16mm. sound, 16mm. silent, 9.5 silent and a few picked 9.5 sound. State which list—enclose 2½d. postage.

PROJECTOR HIRE. We will always quote for hire of projector (with or without operator) and an evening's programme from our library of films.

EASY PAYMENTS for new and used goods. A great boon—as it allows payments to be spread over 9, 12, 15 or 24 months, according to cost of goods. Proposal form on request.

TITLERS and ACCESSORIES. Although these generally are scarce, the stock covered by our numerous branches should satisfy all demands.

TITLING SERVICE. In these busy days of national service there is little time to do justice to those films which one day you were going to do yourself. Let us experts make them up into a splendid full-length film.

WAR CHANGES. The depletion of skilled staff for war services compels the closing of Kensington High St. and Aldersgate St. branches. Enquiries for the former should be sent to Bond St.—for the latter to Fleet St.—until we re-open. The same personal service guaranteed.

'WALLACE HEATON' & 'CITY SALE'

By appointment to H.M. the King

127, NEW BOND ST., LONDON, W.1
'Phone: MAYFAIR 7511 (8 lines)

47, BERKELEY STREET, W.1. - - GROS. 2691
166, VICTORIA STREET, S.W.1. - VIC. 8850
1a, AVERY ROW (Cash Bargains) W.1 - MAY. 7511

59/60, CHEAPSIDE, LONDON, E.C.2.
'Phone: CITY 1124-5-6

54, LIME STREET, LONDON, E.C.3 'Phone: MAN. 0180
90/94, FLEET STREET, LONDON, E.C.4 'Phone: CENTRAL 9391-2
13, THE ARCADE, LIVERPOOL ST., LONDON, E.C.1 - 'Phone: BUS. 6799

R. G. LEWIS LTD. (CINE) NEW ADDRESS: 5, CLAREMONT BANK, SHREWSBURY

SPECIAL ANNOUNCEMENT

It is with much regret that our directors have decided to transfer our business temporarily from London. We hope it will not be so very long before we are able to return to our old address, but in the meantime we feel confident we shall be able to render as good a service as ever from our new surroundings.

Whilst we realise that many of our valued friends will now be unable to call upon us personally, we do sincerely hope that we shall still have the pleasure of retaining our happy connections through our Postal Department. At the same time, we look forward to meeting many of our Midland friends and can assure them of a hearty welcome to our new showrooms.

All post orders will receive the same personal attention as previously and you will be glad to learn that all members of the staff who have not yet been called to one or other of the Services are still with us.

BUY A NEW PROJECTOR

8mm. HOME KODASCOPE

A delightful machine and extremely quiet. Fitted with 200 watts lamp and fan cooling, speed control, enclosed resistance and central tilting movement. Complete in neat case with oil and splicing outfit.

£14 14 0

9.5mm PATHE "H"

Brilliant illumination and ideal for home use. Fan cooling, built-in transformer for 200-250 volts A.C., and motor speed control. For 30, 60 and 400 ft. reels.

£12 0 0

Resistance Model **£12 10 0**

9.5 & 16mm. SIEMENS DUAL 16/9

Undoubtedly the finest dual projector made. Fitted with special Beta movement, causing less wear on films, 250 watts lamp (equal to 500 watts) with coupled ammeter control, brilliant stills and power rewind. Complete with 2 in. Projection Lens and Cover

£59 10 0

GUARANTEED USED PROJECTORS

8mm. Keystone L8, 500 watts lamp, built-in pilot light and variable resistance for 200-250 volts. As new. Cost £23 10 6 **£17 17 6**

8mm. Home Kodascope, 200 watts lamp and case. As new. Cost £14 14 0... ... **£12 10 0**

8mm. SIEMENS, 200 watts, brilliant stills and reverse movement, enclosed resistance. Shop-soiled only. List £36 **£30 0 0**

9.5mm. Pathe Imp, motor, super attachment, resistance and case. Cost £7 12 6 ... ... **£4 10 0**

9.5mm. Pathe 'H,' built-in transformer. As new **£9 17 6**

9.5 and 16mm. Siemens, 250 watts (equal to 500 watts), ammeter control, brilliant stills and power rewind. Absolutely as new. Cost £59 10 0 **£49 10 0**

16mm. Kodascope "C," 100 watts, adjustable, resistance and case. Perfect. Cost over £18 18 0 **£6 17 6**

16mm. Bell & Howell Auditorium, 1,000 watts, special cooling chamber for film. As new. List approx. £160 ... **£85 0 0**

TALKIES

9.5mm. Pathe Vox, 200 watts. Cost £65 0 0 ... ... **£47 10 0**

SPECIAL OFFER
16mm. AGFA REWINDER

Your opportunity to secure a 16mm. geared rewinder at 33 1/3 per cent. below list price. Accommodates 100, 200 and 400 ft. reels, highly geared and mounted on wood base

ONLY **7/-.** Postage 6d.

9.5mm. FILM LIBRARY

Hire rate 1/- per reel for first night and 6d. per reel for each extra night. Add 6d. for postage. 4 reels or more post free. Write for particulars and state make of Projector.

LET US SEND YOU PARTICULARS OF THE NEW CINEPRO TITLER

You will get many hours of enjoyment by making your own titles. It is a fascinating pastime and will add greatly to the value of your films. Write for leaflet.

£6 17 6

UNDERGROUND MOVIES

In the long evenings you will need a good projector, even if your show is necessarily in your air raid shelter. If you use a public shelter you will be doing your bit by allowing others to share your enjoyment of your own and library films.

NEW PROJECTORS

are getting more and more scarce as the season approaches, for the reason that the source of supply of many of the best has been cut off by the war. We are fortunate in holding stocks of many famous models, but the demand is brisk, so do not hesitate too long before choosing your new model. The Siemens' Home is excellent value for £32 10 0. Another 16mm. is the Kodascope EE, which is smashing value at £25 0 0. For the 9.5 enthusiast there is the Pathescope 200B Plus (which also shows 16mm. library films) at £18 10 0. Also the Specto at £15 15 0. The Specto 16mm. model is £16 16 0.

Typical 'Westminster' Second-hand Bargains

Pathescope H, 9.5mm., motor drive, complete with transformer **£10 0 0**

Kodascope 8.30, 8mm., motor drive, built-in resistance .. **£8 7 6**

Kodascope Model E, 16mm., motor drive, 300 watts lamp, case and transformer **£15 17 6**

Kodascope Model E, 16mm., motor driven, 300 watt lamp, case and resistance **£15 17 6**

Specto, 9.5mm., motor drive, transformer **£11 18 6**

Siemens Standard, 16mm., motor drive, 250 watt, case, forward and reverse **£52 10 0**

Ampro, 16mm., motor drive, 750 watt lamp, case .. **£35 0 0**

Siemens Home 16mm., motor drive, 230 watt, resistance .. **£27 10 0**

Filmo, 16mm., motor drive, forward and reverse, 300 watt lamp, case and resistance **£25 0 0**

9.5mm. Pathescope Kid, with universal resistance, good condition **£1 10 0**

9.5mm. Pathescope Lux, motor driven, Ammeter, universal resistance, fitted with super lamp, combination case. A splendid outfit in excellent condition **£12 17 6**

8mm. Kodak 8-35 Projector, 200 watt lamp, motor driven, 240/250 volt resistance, excellent condition **£9 17 6**

16mm. Bell & Howell Filmo 57, 2in. lens, 50 volt, 200 watt. Filmo combination case, universal resistance in box, carefully used and excellent condition **£27 10 0**

16mm. Siemens Standard, 250 watt, 50 volt lamp, 2in. lens, excellent condition **£35 0 0**

16mm. Agfa Rolki, 100 watt, 2in. lens, built-in resistance, light and compact, excellent condition **£8 17 6**

SPECIAL OFFER

Beaded Screens, 46 x 35″ £3 0 0
„ „ 60 x 45″ £4 5 0
Carriage extra

The
WESTMINSTER
PHOTOGRAPHIC EXCHANGE LTD.

81, Strand, W.C.2.
TEMple Bar 9773

119, Victoria Street, S.W.1
VICtoria 0669

111, Oxford Street, W.1.
GERrard 1432

24, Charing Cross Road, W.C.2.
TEMple Bar 7165

Emergency Business Hours:
9.30 a.m. to 5 p.m. SATURDAYS 9.30 to 1 p.m.

modern photography

finds its ideal interpretation in the pages of "Miniature Camera World," the journal that embodies all the latest ideas on this fascinating branch of picture-making.

"Miniature Camera World" is designed to meet the needs of both beginners and advanced workers in miniature camera photography.

It contains articles by the best-known authorities on the subject, and is illustrated with many beautifully reproduced examples of miniature camera work.

Helpful advice is given by experts on all problems which confront workers in this comparatively new realm of photography and readers' individual queries are answered free.

Place a standing order with your newsagent now, and enter for the "Miniature Camera World" competitions for beginners and advanced workers alike.

MINIATURE CAMERA WORLD

1/- Monthly

Published on the 1st of each month and on sale at all Newsagents, Bookstalls and Photographic Dealers, 1/-; or by post, 1/2; from A. C. Burt, Link House, 300-304, Gray's Inn Road, London, W.C.1.

SEND POST CARD FOR FREE SPECIMEN COPY

AMATEUR CINE WORLD

Vol. VII November, 1940 No. 8
(Published October 16th)

Gordon S. Malthouse
Editor

SUBSCRIPTION RATES
United Kingdom and Dominions. 3 months 1s. 10½d. ; 6 months 3s. 9d. ; 12 months 7s. 6d. Foreign 8s. 6d. Post Paid.

Editorial and Advertising Offices : Link House, 300/304, Gray's Inn Road, London, W.C.1.

Principal Contents

Page

AIR RAID. By Terence V. Strong 208

CAMERA CONVERSIONS AND ALTERATIONS. By Stanley W. Bowler, F.R.P.S. ... 210

SUPPRESS YOUR PROJECTOR ! By G. A. Gauld, B.Sc. ... 212

POST RECORDING A RUNNING COMMENTARY. By John Martin, A.R.P.S. ... 213

MAKING STEREOSCOPIC FILMS. By George H. Sewell, A.R.P.S.... ... 215

SPECIAL EFFECTS. By George Pellinore... 217

HUMOURS OF A.R.P. By The Editor 219

CONTINUOUS PERFORMANCE By B. G. D. Salt... ... 221

LETTERS TO THE EDITOR 223

ROUND THE SOCIETIES 225

IDEAS FOR EDUCATIONAL FILMS 227

A.C.W. AND WAR-TIME EMERGENCIES

We regret that there may be occasions when, because of circumstances quite beyond our control, your "Amateur Cine World" may not be ready promptly on the 16th of the month, but may appear a few days late. In such a case we ask your indulgence. If your newsagent has a standing order for the magazine, you can be sure that it will be delivered to you as soon as it is available. Our printers and ourselves are making every effort to publish on time.

WHERE ARE THEY NOW ?

THE value and merit of film plays produced by amateur cine societies have always been the subject of controversy—sometimes heated and acrimonious dispute. Even though one were willing to re-engage in an argument in which a positive decision can never be reached and which advances neither side to any appreciable degree, there would be little point in doing so, for production by the societies is now virtually at a standstill. But, now that so few are being made, is this not the most appropriate time to ask what has happened to the amateur films of yesteryear, to plead for their unearthing and circulation ? Whatever the critics may say, there *are* some extremely good amateur film plays in existence . . . or were. Where are they now ?

A number of societies which turned out good work were lost sight of long before the war. They may, of course, still be trying to carry on, content to hide their quite penetrating light behind a bushel. But one hears nothing of them—has heard nothing for years. Round about 1934, to go no farther back, there was a miniature harvest of successful films. Forgotten films by forgotten clubs . . . Six years ago Independent Film Studios of Hull were flourishing. We recall with pleasure two of their pictures : "Trawler Missing," an expressively handled theatrical film, and "A Peep at the Professionals," which showed activities in the projection room of a cinema.

Good Historical Films

Then there was York Movie Makers who went to some trouble to re-create history for "Dick Turpin and his Famous Ride to York." One of the best of all amateur historical films was "The Red King" by the Regent A.F.S. This society, largely a one-man undertaking, also produced a painstaking version of the Conan Doyle story, "The Speckled Band," in which the period was faithfully and convincingly reproduced. The player taking the part of Sherlock Holmes looked astonishingly like the familiar portrait.

The Seeall A.F.S. made an attractive 9.5mm. comedy, "It Pays to Naturalise"; another pleasing 9.5mm. comedy, "The Parish Haul," came from the Lincoln A.F.S. The Brondesbury C.S. ceased to exist some years ago but have left a memorial in their films. The smouldering ashes of the controversy that raged round one of them, "Two Candles," have long grown cold. This is the film which was reputed to have cost £150 to make, a sum which, of course, included studio rental and upkeep.

From the Bognor Regis F.S. came "Cross Currents" ; from the Hull C.S., "A Garage Romance." Rhos-on-Wye A.F.S. turned out a vigorous picture, "Contact." This was all some six years ago, but the films were for the most part polished and ably produced. One particularly sophisticated comedy, "Alfred Runs to Earth," was made by the Burnley A.C.S. We wrote at the time that it was a comedy which succeeded in being light-hearted and irresponsible without being foolish. It concerned a young man who, in fear of being married off against his will by busybodying friends, fled to the country, where, it being noised about that he was desirous of marrying an innocent country maid, most of the ladies of the place (who were as sophisticated as any city dweller) immediately assumed a coyly rustic air. The unfortunate hero was inveigled into taking a prominent part in local affairs, but finding things far worse in the country than ever they were in the town, fled back to home and his girl.

Another very neat plot was invented by the Beckenham C.S. in "Malice Aforethought." A man plans to murder his wife, a drink-sodden creature who has ruined his life. He buys a tin of weed-killer, mixes the contents with some mushrooms which had been bought from a street-trader. The woman dies. At the inquest, death is attributed to the mushrooms. Crazed by conscience, the husband is impelled to go to the spot where he has hidden the tin. He examines it—and finds that it is marked : "Non-poisonous." Economy of effect was practised tellingly in this film, which is admirably produced.

The Beckenham C.S., one of the oldest and best of the cine societies is, happily, still functioning and—as was announced in the club reports last month—is actively engaged on its twenty-first production. But what of the others ? One must assume that most of them are defunct, but hopes that their films are still in existence.

Programmes for cine shows are difficult to compile these days. There are not enough new films to go round. A few of the best of the old ones have, we regret to record, been lost. As the result of enemy action the Federation of Cinematograph Societies has lost its library. Many worthwhile films must, however, remain, though the clubs that made them have vanished. It would be a handsome gesture if those amateurs in whose custody they now are would bring them to the light of day once more. A small fee, the profit to be devoted to the war effort, might be charged for hire.

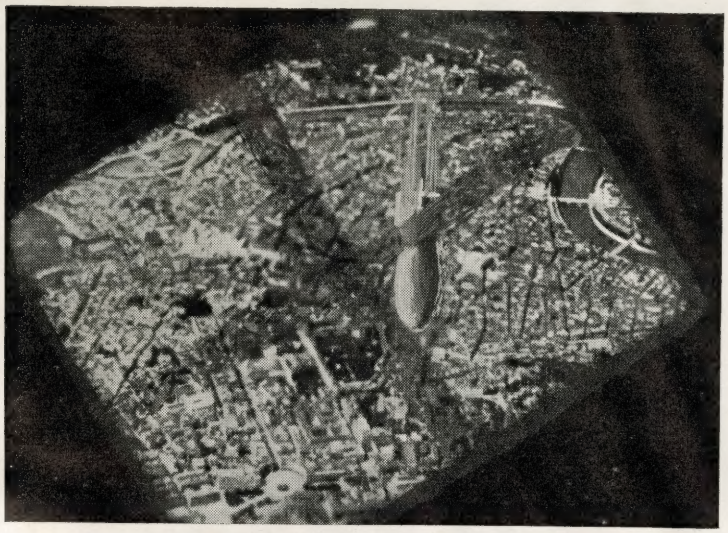
Evenings of revival could be arranged —shows which would have a two-fold attraction : the intrinsic value of the films themselves and the opportunity they would provide for discussions on the progress of amateur film technique. In the case of clubs still functioning, there would be the added interest of assessing their history and achievements through their films. Some four or five years ago an unpretentious 200 ft. 16mm. film (a first effort), "Murder," made a modest appearance. It is difficult now to realise that it came from the same studio as "Nancy's Garage" and "It Never Rains." Similar parallels could be multiplied. But the newcomer to cine work who expects to find the early productions crude and out-dated will receive a big surprise.

Meanwhile, if owners of some of these early films will send us brief details of pictures available, conditions of hire, etc., we shall be pleased to publish them in *Amateur Cine World*. Bearing in mind present conditions, one hopes for a warm-hearted response. Even where the films are already included in the catalogue published by the Federation, publication of the data would fulfil a useful purpose, since there must necessarily be some doubt as to whether the addresses and details there given are all operative.

THE EDITOR.

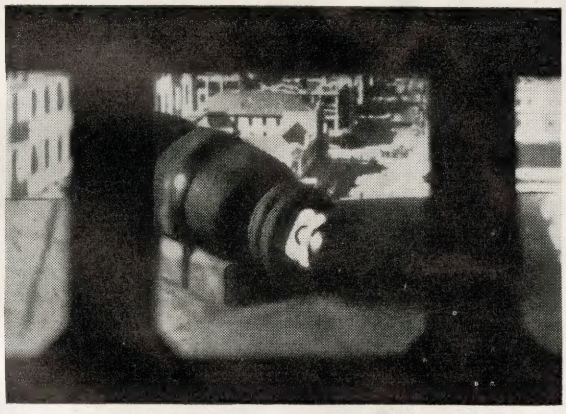
AIR RAID ... AMATEUR'S REMARKABLE TRICK FILM

Here is a detailed account of its production, with enlargements from the 9.5mm. frames. It is the type of work which any amateur can carry out at home at negligible cost and will give him hours of enjoyment at the expenditure of very limited footage.



Left: the fallen raider: a cardboard cut-out against a photographic background; above: a striking scene produced by a simple but ingenious method. The diagram on the opposite page explains it.

MY choice of an air raid as a film theme was not due to any inherent sadism. It was its possibilities as a cine-exercise that decided me to work on it. The characteristics which appealed to me were: first, that it could be planned in absolute detail, and second, that a good deal of faking would be required. The necessity of planning has, very rightly, always been stressed in *A.C.W.* I am convinced that any success I achieved in making "Air Raid" was due to my having visualised the film in detail, and complete, and—what is more important—having written down the script in detail before starting to shoot.



Air raid siren on roof top. The diagram on the opposite page shows how the scene was built.

If a detailed script was to be adhered to strictly, shots which depended on fortuitous circumstances for their completion had to be reduced to a minimum, if the film was to be finished within a reasonable period. I had to do a lot of this purging, but eventually I either resorted to faking the difficult shots or was content with shots of everyday occurrences which could be given a special significance by editing.

I might mention that for editing I use a drawer containing fifty numbered matchboxes. As each shot from a script is completed, it is put in the appropriate box, which is stood on end. Using a simple system like this, I can, if I like, start shooting from the middle of a script and work in both directions, and, when all the shots are obtained, they are in the right order, just waiting to be trimmed and spliced.

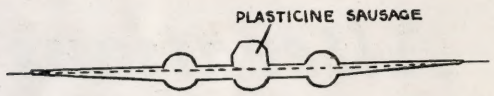
Now for the actual production. A film needs a beginning. A self-evident statement? Yes, but it is not easy to think of an effective opening that is intriguing and neither obvious nor hackneyed. I decided to open on a peaceful woodland scene. It is followed by a medium close-up of a 'wild' rabbit (hired from the pet shop) which 'freezes' as if suddenly startled, and then bolts for home.

Next, via a signpost marked LONDON, to a siren in action. This shot was manufactured in the titler (see diagram). A good photographic reproduction (from a magazine) of a street view taken from the top of a tall building was affixed to the title board; eight inches in front of this and between the lamps and the camera I placed a black cardboard cut-out meant to represent a stone balustrade; in between was a square of carefully dirtied cardboard, arranged so that only two adjacent edges could be seen through the balustrade, from the camera position. This was the roof of an adjacent building. From such an angle the side of the building would not be seen, so the cardboard achieves an appearance of solidity. On the 'roof' was the siren, made from a bayonet adapter, the metal end of a pump connector and some plasticine. The cut-out is, of course, out of focus, but this actually gives a more convincing impression of depth to the set-up.

The next shot is a close-up of the siren vanes rotating at speed. These was simply a heavy disc mounted on the title board and filmed while spinning. Now come shots of wardens blowing whistles. They are seen in long shot to begin with, but these are succeeded by quickly cut close-ups to suggest increasing urgency. (One tin hat and a rather disreputable raincoat were used by a number of my tougher-looking friends for these shots). Then follow people going to shelter. I obtained a few feet of an office rehearsal for this.

Next, a number of short shots of A.A. guns being slowly elevated against a gloomy sky. These were models made from old fishing rods, broomsticks and the tubes of a derelict telescope. Detail of

By TERENCE V. STRONG



Enemy bomber—made out of plasticine, and filmed from head-on viewpoint against the sky.

gun barrels was needed in one dimension only, as the models were filmed in silhouette against the sky. Again, I cut from long shot to close-up to express impending danger. Follow more shots of people going to shelter. This time I filmed a steady stream of people going in one direction and by cutting in shots of "To Air Raid Shelter" notices, defined their purpose. This was the only occasion on which I bumped into the Law. Like a fool I had been standing with my camera under the walls of a factory engaged on war work. I spent two awkward hours in a detention cell, while my credentials were verified. Moral: however innocent your intention may be, make quite sure that no action of yours can be misconstrued as an infringement of the regulations.

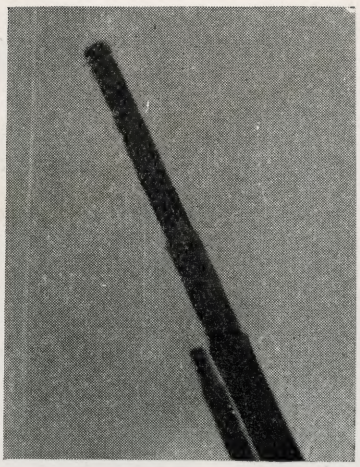
Next in the film appears a formation of raiders in the distance, but all that can be seen of a distant aeroplane approaching is the outline of the nose, engines and wings. The motion from a head-on viewpoint is scarcely noticeable. The effect was obtained with suitably shaped "sausages" of plasticine rolled round a fine thread (see diagram). The thread was strung across the garden and the 'planes' filmed against a cloudy sky. Here, the high-light intensity of the sky coincided with the great depth of focus required, and f/16 did the job for both.

Mounting Excitement Produced by Cutting

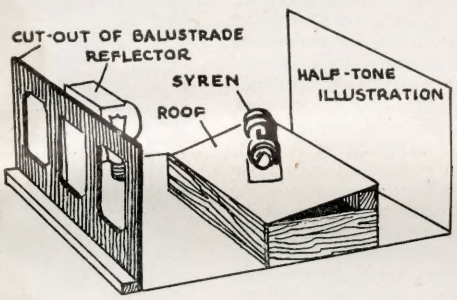
The guns start firing. I mounted each model in a crude frame and attached a strong piece of catapult elastic to it, so arranging it that, when the gun was pulled down, it recoiled smartly. Filming this a number of times from two or three angles, and intercutting very short shots of each view, gave the impression of a large number of guns in action. To give rising intensity to the sequence I cut each shot a little shorter than the preceding one, ending with two or three less than three inches long.

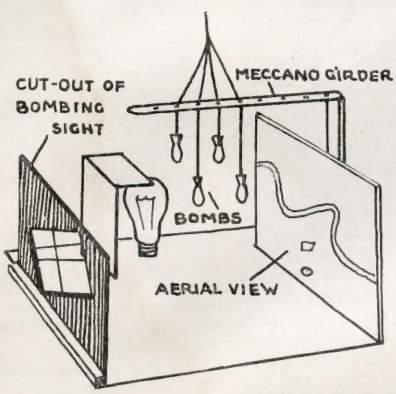
By now the raiders are right overhead—a situation suggested by sticking very small black cut-outs on a large sheet of glass and shooting against the sky. Movement was dispensed with as the supposed height of the raiders would render this very slight, and in a short shot, unnoticeable. Then we have an aerial view of London from a bomber. Another magazine yielded a good aerial view of Melbourne. It was set up in the titler with a black cardboard cut-out of an aeroplane wingtip and strut a few inches in front. An assistant moved the view very slowly across the title area. In this shot a depth of a few inches in the titler serves for twenty thousand feet. At the first showing someone said he remembered the view from having been up himself, and volunteered to point out Hammersmith . . . in Melbourne.

Aerial view cut from a magazine, with black cardboard cut-out in front. The photograph was moved very slowly to suggest flight.



The guns raise their heads. They look forbidding in the film, but they are only pieces of old fishing rods, broomsticks and the tubes of a derelict telescope. They were shot in silhouette against the sky.





Set ups for the siren and bombing scenes illustrated opposite.

Back to the guns, and then comes a view through the bombing sights. The set-up was the same as for the previous aerial view, only instead of wingtip silhouette, a rectangular aperture with fine crosswires was used, set askew to the title rectangle. The bombs were made of plasticine, each about half an inch long, and were suspended by fine hairs of varying lengths. To keep the bombs apart, the hairs passed through separate holes in a Meccano girder mounted above the titler in a line with its long axis (see diagram). The 'bombs' were raised above the title area and then, with the camera set to 'slow motion' speed, lowered at slightly less than natural falling acceleration. The result has just sufficient blur to suggest speed.

To render explosions adequately was a problem, but I obtained fair results by exaggerating a beginner's fault. Panning up the front of a building very fast gives the impression that the walls are falling backwards, and a similar effect of disruption is obtained by tilting the camera rapidly in a slantwise position. The deliberate fuzziness and distortion produced gives a quite good explosive effect. From these artificial shots I cut to actual shots of falling masonry and clouds of dust. These were obtained on a site where several condemned houses were undergoing demolition. Next I showed static shots of damage, obtained from the same source, and indistinguishable from the tragic results of actual warfare.

The sequence of guns, 'planes, bombs and explosions is repeated with variations. Repetitive cutting increased the apparent length and scope of the action to a degree out of all proportion to the extra footage involved.

One of the variations called for more work with the titler. It shows a wall cracking as the result of an explosion. The wall was a piece of weathered asbestos boarding about a foot square, suitably cracked and put together again, and mounted in place of the title board. To convey the scale of the set, a few miniature posters, such as are available in the Hornby Railway series, were stuck on the board, and "weathered" by dirty fingers, glasspaper and judicious tearing. This ageing process is important; models tend to betray themselves by appearing too smart and new.

Just in front of the 'wall' I arranged a strip of webbing, coated with brick dust and small pieces of plaster. An accomplice started

(*Continued on page 228*)

Camera Conversions and Alterations

In order to produce certain types of animation and cartoon films successfully, there are a number of modifications which it is desirable to carry out in the camera. In this article our contributor describes how to take it down.

By STANLEY W. BOWLER,
F.R.P.S., F.R.S.A.

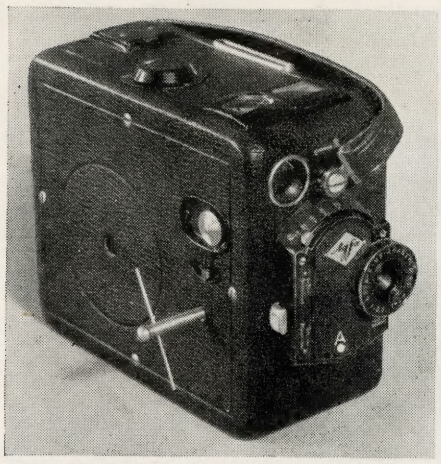


Fig. 1.

FROM time to time the use of this or that type of cine-camera has been suggested for such special work as cartoon-film production, animation work, etc. I do not, however recall any descriptions of the best methods to be adopted in taking-down a cine camera in order to effect some conversion or other alteration. It is hoped, therefore, that the following notes may be of use to those who may contemplate attempting such work.

Very few tools are required, but those that are necessary should be of good quality. Only a very good mechanic can do mediocre work with poor tools ; the same tools in inexperienced hands become almost dangerous weapons. Two or three screw-drivers with blades of different sizes are essential—the end of the blade should not be sharp but should have a definite flat edge to it, otherwise the blade will not be a good fit in the slot of the screw which it is desired to turn.

Two or three pairs of pliers, all fairly small, two with serrated jaws and one pair with smooth jaws, are useful. A model-maker's adjustable spanner, such as can be obtained from Bond's of Euston Road, London, N.W.1., is to be preferred on all occasions to a pair of pliers for the loosening or tightening of hexagonal nuts. The nuts will soon become defaced through the slipping of the plier jaws across the angles. Another useful, though not essential, addition to the kit is a set of small tubular box-spanners.

A Specific Example

Finally, in addition to the more ordinary sized screw-drivers, either a set, or two or three different sized watch-maker's screw-drivers are required for dealing with the very small screws used for the fixing of such things as lens-mounting accessories and escutcheon plates (these are the thin plates, usually of metal, which serve to cover or act as indicators for levers, knobs, etc., which pass through the camera casing from the body of the camera mechanism).

Since we propose to investigate the internals of cameras in general, it will be helpful if we take a specific example to make clearer the various points to be considered. Fig. 1. shows an external view of the Agfa f/3.5 cine camera, 40 foot cassette type, which has been converted for taking single-pictures for either cartoon or puppet work. This illustration will serve to show both the completed job and also act as a reference for various remarks on taking-down most cameras.

This camera is an exceedingly easy one to convert for single-picture work ; it has the advantage of charger-loading, which enables the camera to be opened with only a small wastage of film stock between shots, the gate-back can be lifted out very easily to permit of the insertion of a focussing-prism into the gate for very critical lining-up on titles, close-ups, etc., and the amount of mechanical work involved in alterations to it is extremely small. One further advantage at the present time, too, is the fairly low second-hand value of these cameras.

Before attempting to take to pieces any camera, *always* run the clock-work motor right down. Next prepare a clear working space. And here are two important things to remember : (1) use a big tray on which to work, so that small screws do not roll off on to the floor (or into one's trouser turn-up) ; (2) provide a number of small saucers into which can be placed small groups of component parts and their appropriate screws, nuts, bolts, etc.

Whatever the type or make of camera upon which work is to be done, it is almost certain that most or all of the external fittings will have to be removed. We will take the Agfa camera as a working example.

(a). Remove the carrying handle, in this case fixed by screws at the front and the back. Under the front screw will be found a washer and a loose black piece of metal which acts as a cover-plate for the "close-up indicator" rod. Always make written notes of the order in which these parts are removed—you may be interrupted in your work, and one soon forgets the order of assembly.

(b). Most winding-keys are held on to the winding-shaft by means of a pin or screw passing through both. In the case of the Agfa camera, this same fixing holds the circular escutcheon-plate, the mark of which can be seen impressed in the leather covering of the side of the camera in Fig. 1. The fixing-pin must be carefully driven out with a thin punch ; if a proper punch is not handy, then a round nail filed flat across the point will serve if used with discretion. Finish off the removal of the pin by withdrawing it with a pair of smooth-jawed pliers. The use of serrated-jawed pliers will mark the pin and make it difficult to put back again without first filing it smooth. The key and the round leather-inset circular plate will then be free.

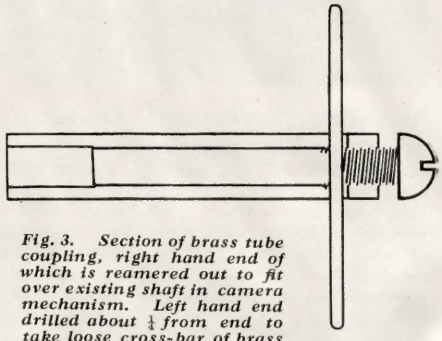


Fig. 3. Section of brass tube coupling, right hand end of which is reamered out to fit over existing shaft in camera mechanism. Left hand end drilled about ¼ from end to take loose cross-bar of brass wire, held in place by round-headed screw tapped into the tube.

(c). The starting-button and its escutcheon-plate must also be removed. In the example given, the button is held by a central screw and the shaped plate by three very small screws, one at the top and one at each of the two bottom corners. Take care not to lose the loose, shaped pieces of metal lying under this part.

(d). The footage-counter cover is held by three small screws spaced equidistantly round the rim. Under this cover will be found the circular indicator with a central screw fixing. On removing this, the whole assembly may be lifted out.

(e). Remove the iris indicator strip, above the front lens panel, on which are marked the stop numbers. This strip,

STORING YOUR FILMS

THE following procedure is now generally agreed to be the best for preserving stored films :—

1. They should be wound emulsion outwards, and fairly tightly—the tightness being such that the coil of film is neither sloppy nor hard. To ensure satisfactory tension, hand rewinding at an even, steady pace is best. On no account should the film be tightened after winding by pulling the free end, as this causes surface abrasions.

2. They should be stored in tins *without* humidifying pads, the tins being kept in any ordinary room free from excessive heat or damp.

3. The only attention necessary is an examination once a year ; and this merely consists of slowly rewinding the film, twice, so as to leave it the right way round. It is a good plan to leave a history card with the reel in the can, upon which is jotted down the date of every showing or annual examination. This, incidentally, will be found to indicate how very short a year is !

As regards practical experience of storage, our first film shot on safety film was taken in 1928, and has always been stored as described above. Now, after more than 12 years, neither the base nor the emulsion has in any way deteriorated.

curved in shape, is held by two small screws. A hook-shaped projection from it fits over the stud into which the handle-fixing screw goes.

(f). (1) Finally the lens-panel with the trade-mark, "Agfa", must be removed. At first sight this appears to be held by two screws only, but when these two, at the top left-and right-hand corners, are removed, it will be found that the panel still cannot be taken off. This sort of thing very often happens when one is dismantling apparatus, and the temptation to use force must be resisted. If a piece of equipment has been assembled (with the exception of rivetting, soldering or spot-welding) then it can be taken to pieces again in the same way. If a snag of the kind mentioned is encountered then look for some form of "*secret*" fixing.

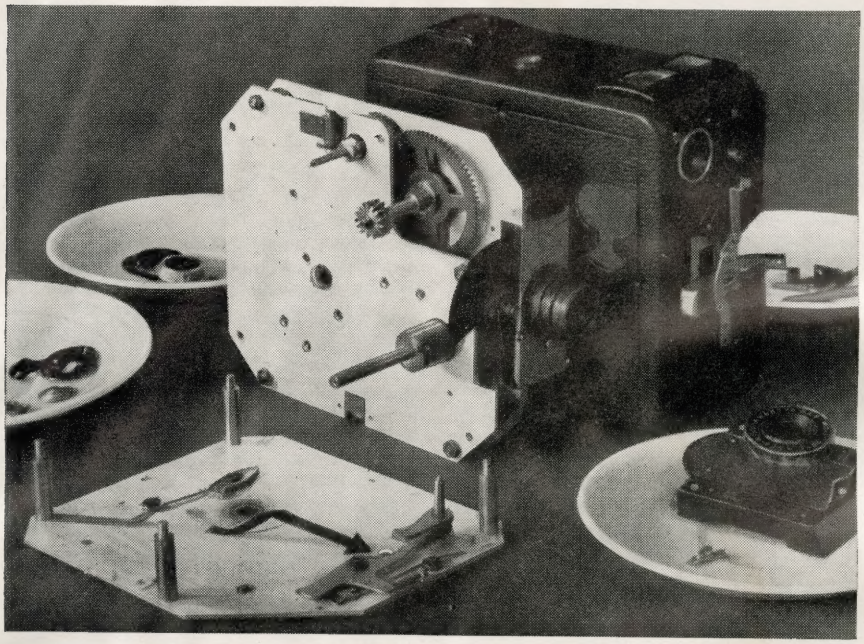


Fig. 2.

In the case of the Agfa camera, the third screw will be found under the leather inset in the centre-point of the 'V' of the bottom of the panel. This third screw is marked with the letter "A" and a white dot in Fig. 1. The leather covering is gently lifted back by means of a sharp penknife only so far as is necessary to disclose the screw-head. When this is done, the depression or counter-sinking in which the screw fits, and the screw-head and the slot in it, must be carefully cleaned of the glue used to hold the leather inset. When this screw is taken out the whole of the die-cast panel can be removed.

(f). (2). Under the lens-panel will be found the control levers for the iris diaphragm and the focussing mechanism working in a slot, an extension of which forms the "close-up" indicator rod. The screw-fixing of the iris rod link should be undone, and when it is free, the screw should be replaced in the arm on the lens from which it was taken. Simple precautions of this type prevent the loss of odd screws.

Now for removing the main holding screen of the mechanism. (a). The mechanism of most cameras is held into the outer casing by screws from outside. In the Agfa camera, there are four of these (see Fig. 1.) one in the centre of each of the four sides of the rectangular lining embossed in the leather covering of the camera-casing.

(b). An additional fixing is also frequently that of the tripod-bushing ; in this instance, the bushing-block is held by two screws from the outside, one fore and one aft of the tripod hole. Inside the camera-casing, immediately above the bushing-block are two other screws, one of which passes through and serves partly to hold the charger-lifting device. When these four screws are removed it will still not be possible to withdraw the mechanism. This is due to the fact that the bushing-block is still projecting through the bottom wall of the casing.

From Fig. 2 it will be seen that this block slides up and down in a slot cut into the mechanism plates, the outer one of which is immediately below the end of a projecting shaft. This block must, obviously, be pushed inwards, and then the mechanism can be lifted out quite easily from the case. When doing this, gently ease the connecting pin on the focussing-rod from the lens out of the slot in the control arm in which it runs.

Removing Main Spring

To remove the clock-work main-spring : (a). When a camera is being converted for single-picture work, it is almost always an advantage to remove the main-spring completely, or alternatively to remove an intermediate gear, provided that this latter does not interfere with any other section of the train of gears. Most camera mechanisms are built between two or more flat plates. It will be remembered that it was advised at the beginning that the clock-work should be allowed to run down ; if this precaution is omitted it may happen that one or more gears would be stripped or damaged when the mechanism plates were taken apart, and the power of the spring released.

(b). In Fig. 2 can be seen one of the outer plates removed, and the four short studs, screwed at their ends, which serve both as distance-pieces to space the plates the correct amount apart, and also, by means of nuts on the screwed portions, to hold them together. When this outer plate is removed the main-spring-casing can be taken out in its entirety. With the Agfa camera, this is the better plan as the small gear, which is driven by the peripheral gear on the main-spring-casing, also carries on its shaft a gear which engages both with the next gear of the mechanism and also the counter-gear. This latter is a desirable feature to retain.

Adaption for Single Pictures

To adapt a cine-camera for single-picture working is one of the most frequent jobs undertaken, and the first problem to be tackled after the camera has been dismantled is to find a shaft which rotates once for each complete frame exposed. This shaft is often the one which is connected to or directly operates the cam of the pull-down claw. In the Agfa camera this shaft is the one on which is mounted a solid brass flywheel (Fig. 2.) in which a slot is cut.

The shaped trigger of the start-and-stop button drops into this slot when the camera movement is at rest. The end of the shaft is finished with a shouldered end which runs in a brass-inset bearing fixed in the aluminium side-plate of the mechanism.

The simplest conversion in this case is as follows : A short piece of brass tube, say $1\frac{1}{2}$" in length, about $\frac{1}{8}$ bore and 3/16ths of an inch outside diameter, is cut true both ends, and one end is gently reamered out until it is a very good push fit on to the short end of shaft beyond the brass flywheel. It should be such a good fit that it will turn solid with the shaft slipping. The other end of the shaft can be treated as shown in Fig. 3. or provided with an alternative coupling.

Smooth Bearing

The brass inset in the side-plate is then carefully drilled out, so that it provides a smooth bearing, without play, for the new tubular shaft. This new bearing hole is indicated by the black arrow lying on the side-plate. The side-plate can then be replaced exactly as it was before dismantling.

Since a new hole must be provided for this extended shaft in the camera-casing, care will have to be taken to see that it comes in the right place. The hole can be measured off from one or two places as a check, e.g., from the starter-button escutcheon-plate and from one of the main fixing-holes nearest to it. This hole should have a slight clearance so that the shaft runs quite freely when the mechanism is replaced in the camera-casing. When this is completed satisfactorily, the whole camera can be re-assembled and this is where the written notes about the order of assembly come in extremely useful !

The completed job is shown in Fig. 1. The hole where the winding-key shaft went through has been blocked up with a piece of leatherette-cloth to make a neat job of this part, and to exclude light from the interior of the case. Provided care is taken, the work does not offer any great difficulty to anyone with a moderate degree of manual skill, access to a few essential tools of simple character, and an orderly method of procedure.

SUPPRESS YOUR PROJECTOR!

Every month our contributor will supply a page of practical ideas; things to make and things to do. If you feel the need for a device that you do not know how to make, he will be pleased to hear from you.

By G. A. GAULD, B.Sc.

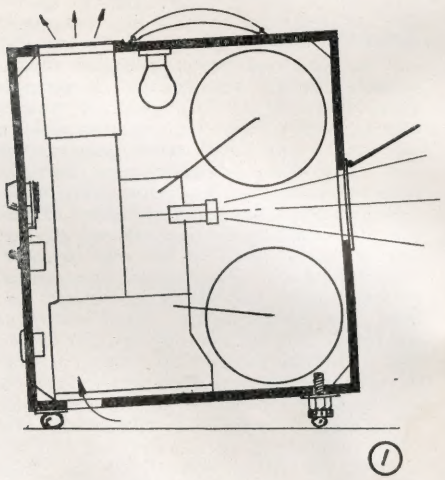
VERY few of us are in the happy position of having a spare room or attic for conversion into a permanent home cinema; the lounge must usually serve, the screen and projector being rigged up for each performance. Nevertheless, a great deal can be done to simplify the business and to obtain the right atmosphere for our show.

It must always be borne in mind that the professional exhibitor is a shrewd business man who does not spend vast sums of money on his "picture palaces" without good reason. The amateur showman will find it well worth while to devote some thought and energy to the effective presentation of his films, whether it be in the local schoolroom or at home.

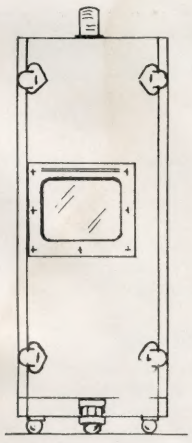
A Common Aim

Let us first consider the projector. The professional conceals the projection room from the audience for a number of reasons, not the least of which is to suppress, as far as possible, the mechanical side of the cinema. The aim of the producer, amateur and professional alike, is to make the screen a living thing. The clatter of the machine, the glare from the arc, the antics of the operator: these must be concealed from the audience if the illusion is to be preserved. The amateur operator cannot very well conceal himself; in fact, at the home show it is not altogether desirable that he should, but it is a very simple matter to suppress the machine by enclosing it in some form of projection box.

A simple type of box is shown in Fig. 1. A few points have to be considered in determining the size. It could be made smaller by having the spools outside, after the style of some of the commercial talkie machines, but it would not exclude that most irritating noise, the scraping of the edge of the film against the take-up spool, if the latter is a little out of true. Furthermore, the box serves as a storage case, and if the whole machine is contained within it, then the business of getting it ready for a show consists of little more than placing the case on a table.



(1)



Full explanations of these diagrams are given in the article. Photographs of the case will be reproduced next month.

It is therefore worth while to make the internal dimensions of the box big enough to include the spools, allowing half an inch or more clearance. The width will be determined by the overall width of the projector, and there should be no trouble with regard to access to the mechanism, as both sides are arranged on hinges to swing wide open. If a resistance is used for the lamp, it will be too bulky to include. In any case, the heat generated from a resistance would give trouble. A transformer, being smaller, may be included, but provision for adequate ventilation should be made.

The main body can be made up from plywood or good, straight grained pine, $\frac{3}{8}$" or $\frac{1}{2}$" thick. If the reader is fairly handy with saw and chisel, dovetailed corner joints should be made, and substantial corner fillets well glued in will ensure a strong and rigid framework. It is difficult to get plywood of a size big enough for the doors, which will at the same time remain perfectly flat. It is better to get a couple of doors framed up at the local joiner's shop on the lines of Fig. 2. Such doors will never warp if made of seasoned timber.

The machine should now be tried in position on the base, and holes drilled to take the holding-down bolts which will secure it in position. A couple of large diameter holes should next be drilled in the base as near as possible to the intake from the ventilating fan. The chimney will have to be extended with a piece of sheet metal, bent to shape, to take the outlet up through the top of the case. This is necessary to prevent short circuiting of the cooling draught inside the box.

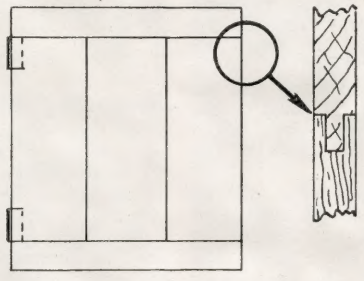
The outlet can be neatly finished off with a piece of gauze clamped down with a narrow wood or metal frame. A piece of fine gauze or stout muslin should be fixed over the inside of the holes drilled for the intake, to act as a filter. You will soon discover what a tremendous amount of dust is kept out of the "works" in this way!

Marking Out the Window

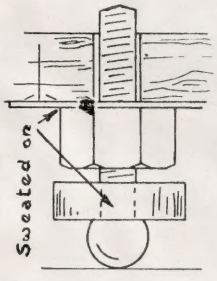
The next job is to mark out the opening for the window. The lamp is switched on and with the lens focussed to the usual distance to the screen, a line is pencilled round the edge of the rectangular patch of light where it strikes the inside face of the box. The machine is removed and the opening cut about $\frac{1}{4}$" bigger all round.

The machine is replaced and the exact size of the metal window frame determined in the following way. The screen is erected and the projector, in the box, set up and adjusted until the light beam exactly covers the screen to the edges of the border. By sliding a postcard over each edge of the window in turn, the exact size of frame can be determined which will confine the light to the edges of the screen and no more. In this way, any spread of unwanted rays of light is completely removed and the only illumination is concentrated on the screen itself.

The frame is made up from sheet brass about $\frac{1}{16}$" thick. It is cut with a hacksaw and filed up square to a size $\frac{3}{4}$" bigger than the opening all round. The opening is made by first of all drilling holes round the edge, as indicated in Fig. 4 and then cutting through the remaining tags of metal with a fret saw. The job is then carefully finished off with a file.



(2)



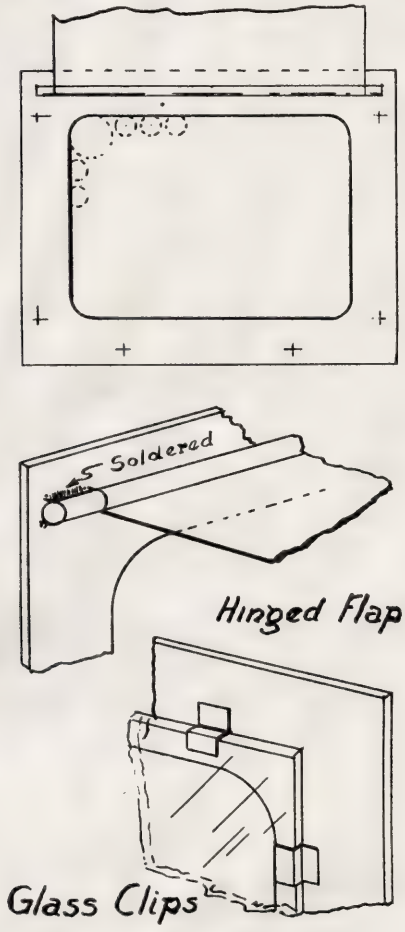
(3)

Holes are drilled round the frame to take countersunk screws which will fix the frame in place on the box. The small clips soldered on and the flap are made up in a lighter gauge sheet. The hinge pin for the flap can be a knitting needle, the edge of the flap being rolled over to form the hinge. It should be stiff in action so that the flap

" stays put " when lifted up. The flap not only protects the glass when out of use, but is closed down following the appearance of " The End " on the screen. This permits the trailer to be run off on to the take-up reel without any distressing effects on the screen to mar the end of the film.

The glass is obtainable from instrument makers such as Messrs. W. F. Stanley & Co., Ltd., Erith, Kent, and is that used for making microscope slides. It is about $\frac{1}{16}$" thick and to all intents and purposes perfectly flat. There is no distortion of the picture and, being thin, the loss of illumination is negligible. Glass ground optically flat is very expensive and for our purpose the cost is hardly justified.

A few more odds and ends are required to complete the job ; these will be dealt with next month.



④

I should like to thank those readers who have sent suggestions for gadgets they would like to see dealt with in this feature. Unfortunately, for the most part the gadgets suggested have been such that either they would be too difficult to make or would scarcely be of general interest. But one suggestion has been received for a very useful device which many readers would be glad to own ; I am working on it now, preferring not to give any instructions till I have made the thing for myself and ascertained that it works.

POST RECORDING
a Running Commentary

In this, the second and concluding instalment of the article on post recording on disc (the first appeared in last month's issue) the start and change-over of records and methods of post recording are dealt with.

By JOHN MARTIN, A.R.P.S.

THE only problem left now is the start and change-over of the records. The method usually advised is to lower the pick-up head by hand on to the first groove at a predetermined place on the film. Anyone who has had experience of this will realise that this is not at all easy—one can frequently be 3 or 4 grooves out. As one groove represents one revolution of the turntable or 1/80th of a minute, it will be seen that three or four grooves will make a difference of 36 to 48 frames on the film. Another drawback is that the person operating the turntables has to watch the screen for the cue mark and then lower his head to the turntables and find the first groove on the record. No harm will be done if the time taken to do this is the same as that required to do the same operation on the recorder, but in practice it will be found well nigh impossible to make these times identical in both recording and play-back.

Lowering the Pick-up

We can overcome these drawbacks by constructing a small gadget to lower the pick-up on the first groove by the turn of a lever. This operation is practically instantaneous ; in any case, any small time lag will be the same on the recorder as on the turntables, since the operation is identical in both instances. Most wireless dealers have a collection of old variable condensers, the spindle portion of which can form the basic part of this little gadget.

It consists of a screwed sleeve (*I, in Fig.* 1), through which passes a fairly close fitting rod *B*. On to this rod is soldered a V-shaped piece of brass *A*, the top part of which is cut away to hold the pick-up arm. The arm should make a snug fit without any lateral movement. The screwed sleeve passes through a bracket *D*, fixed securely to the turntable, and a nut *C* is threaded on to the sleeve and soldered in to bracket *D*. A locking nut *F* is threaded on the sleeve at the other side.

No Sudden Drop

The rod *B* passes right through the sleeve, and at the end is a collar carrying a threaded lever *H*, by which the collar can be tightened up on the spindle rod. To the collar is soldered two small pieces of brass *G*, which act as stops against the screw *E*. The pick-up, when placed on *A*, is lowered on to the record by the simple movement of lever *H* from upright to horizontal, the V-shape of *A* causing a gradual lowering rather than a sudden drop. The lateral position of *A* can be adjusted by means of the sleeve *I* and the locking nut *F*.

On the recorder a small stop is fixed so that the cutting head will be lowered on to the disc at the identical position on each record. On the Permarec recorder this can be done quite simply by arranging a small collar secured by a screw on the main bar of the tracker. The tracking head is then moved up to this stop each time a record is cut. The cutting needle should start the first groove about $\frac{1}{4}$" in from the edge of the record.

A short trial cut on the recorder should now be made, preferably on speech—5 or 6 grooves will be quite sufficient. The record is then transferred to the first turntable and the pick-up lowering device adjusted by means of the screwed sleeve until the needle strikes the first groove. This position can be determined audibly from the speech which has been recorded. The other turntable is now adjusted in the same manner and each position fixed by means of the locking nuts. Provided the lowering of the lever is done smartly and firmly on both recorder and turntables, we cannot be more than a portion of one groove out and in practice this will seldom be more than 5 or 6 frames. The advantage of this method is that we can keep our eye on the screen for the cue mark and ensure lowering the pick-up on the first groove without even looking down.

Now that we have overcome the two main difficulties of sound-on-disc, namely synchronisation and the start and change-over of the records, we can turn our attention to the method of post-recording. The type of

(*Continued on next page*)

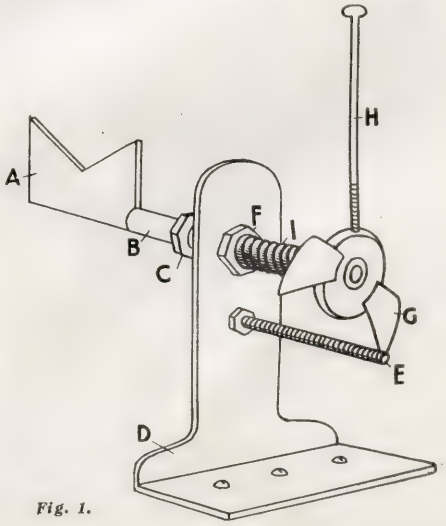
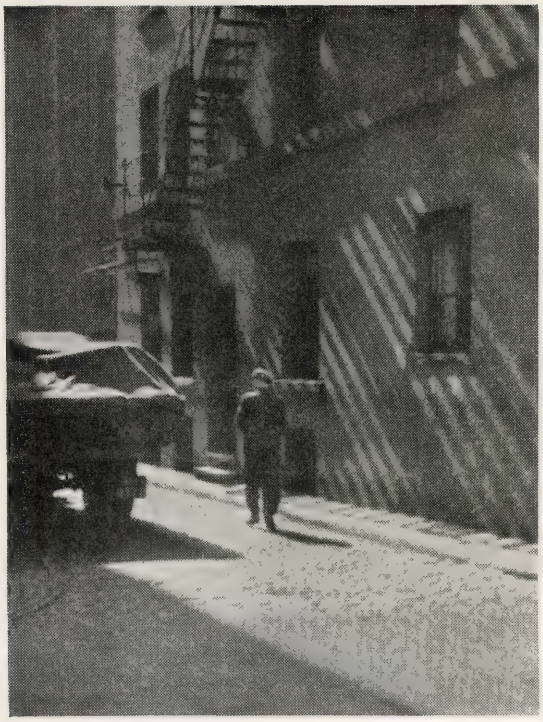


Fig. 1.

An Ideal Job for Cine Societies

(*Continued from previous page*)



Time of day plays a most important part in the success of cine shots. This shot is redeemed by the play of shadows; lacking them there would be little in it of interest.

recording we shall find most generally useful is a running commentary with background music and perhaps certain sound effects. Travel films, documentaries, scenic films, films of the news-reel type, all lend themselves to this treatment, and there is no doubt that their presentation is considerably enhanced by the addition of speech, music and sound.

Supposing we have 400 feet of a travel film which we wish to score. The first thing to do is to write a commentary to fit it. The basis of the commentary should be to give information and, moreover, information which is not conveyed by the pictures. Interesting points which are not fully apparent from the film can be pointed out in the commentary. Continuous speech from start to finish is wearisome, so allow generous intervals and do not make the commentary too flowery.

Trying Out the Commentary

When the commentary has been written, try it through with the film. The chances are that it will be much too long. Go through it several times, cutting out, pruning, altering and condensing phrases until the words fit comfortably into the various sequences. Write or type the commentary out and each time a break in the narrative occurs, start a fresh paragraph and mark in at the side the appropriate cue mark.

Suitable background music should now be chosen. The type will naturally vary with the film, but records can be tried over and passages to suit sequences selected. There is no dearth of recorded music—music to induce any mood—gay, solemn, romantic, exciting, tragic, music to increase the tempo, leisurely music, music, in fact, to suit any and every occasion. It should not be so assertive that it calls attention to itself. The ideal music is that which helps the picture without the audience being aware of it. It should form a background to the essential feature, which is the film.

Sound effects also should be incorporated sparingly and not overdone. Introduced appropriately they can be extremely effective. There is a great variety of recorded sounds available on effects records, but one can easily build up a library of one's own recordings. For instance, it is surprising the number of mechanical sounds one can concoct in the home—the ordinary domestic carpet sweeper can produce a variety of sounds which are most weird when they are amplified, a lathe, an electric fan—even the projector itself—can be pressed into service. Several sound effects can be recorded on each side of a record and used when the occasion arises. With suitable music chosen and sound effects recorded, a cue sheet should now be made, showing when the different records should come in.

Using 12″ discs, it will be found that these will accommodate sufficient commentary for over 100 feet of 16mm. film, running at 16 frames a second, on each side, so that the four sides of two records will easily take 400 feet of film.

The Change-Over

The film should now be run through and a suitable scene noted at the end of approximately 100 feet for the change-over from the first record to the second. It is important in the change-over that we choose a scene that does not require any commentary, as we cannot change over on speech, but can quite easily do so on background music. An appropriate place is a fade-out of one sequence and the fade-in of another. A dissolve or even a sub-title makes a good spot for a change. Once we have decided upon this, we can start rehearsing the first record.

Recording is essentially a job for a team. One cannot get very far alone, so it is consequently better to enlist the help of several friends and get them acquainted with the various jobs which have to be done. We shall require one assistant on the recorder, brushing away the swarf, another on the amplifier, regulating the volume and changing the records, another on the speed control of the projector to ensure synchronisation, and one at the microphone to give the commentary.

The job is one which seems ideally suitable for cine societies ; clubs might well consider the possibilities of purchasing a recorder, forming a recording team from among the members and producing records for individual members at a fixed price. This would hold the interest of present members and might well be an inducement for others to join the society.

The first part of the job should now be thoroughly rehearsed until everyone knows exactly what is required of him. The projector operator should concentrate on keeping the speed of the projector steady by watching the stroboscopic disc on the recording table. He should aim at keeping one bar apparently stationary opposite to a given mark ; the nearer he can get to this, the closer the synchronisation will be.

Background Music

The amplifier operator should attend to the volume of the recording. The background music should be subdued when speech is on and brought up again when the speech is ended. It is important that he knows the cues when to go up and down. The person at the microphone should know exactly when to come in with each paragraph and learn the commentary almost off by heart, so that there will be no mistakes or stumbles in the speech.

A generous leader strip of 15-20 feet should be attached to the film. The object of this is to allow the projector operator to regulate the speed control so that by the time the opening title appears the stroboscopic disc is apparently stationary. Two scratch marks should be made on the opaque leader strip, one 18″ and the other 30″ in front of the main title. The object of the latter is to prepare the recording operator for the proper cue mark 12″ further down the film.

All Set

All should now be ready for the recording. The turntables and the recorder are set going and the film started through the projector. The recording assistant watches the screen with his hand on the lowering lever, and at the first mark prepares to lower the cutting head. As soon as the second scratch mark flashes on the screen, the cutting needle is lowered smartly on the record and the amplifier assistant fades in the music on the opening title. Speech through the microphone is now introduced at the appropriate places and the recording proceeds. The background music is allowed to proceed for 5-10 seconds at least—more if there is space on the record—after the change-over mark has been reached. On the playback this will allow ample time to make the change to the second record, before the necessity arises of lifting the pick-up on the first record.

Making STEREOSCOPIC FILMS

An introduction to this short series, enumerating the basic principles, was published in our October issue.

By GEORGE H. SEWELL, A.R.P.S.

IN describing last month the various methods of approach to cinematography, only one interpretation of the complementary-colour theory was referred to. A second application of the theory, of even more practical character, is within the possibility of amateur application.

Two separate and complete records of the subject are taken, one representing the left-eye view and the other the right-eye view. As before, the viewer is equipped with coloured glasses, one eyepiece being red and the other blue-green. If we accept for purposes of explanation that the left eye-piece is red, then it will be necessary for the 'left' pictures to be stained red all over, the normal silver image remaining otherwise untouched.

Sensation of Blackness

Viewed through the left eyepiece, these pictures will appear as a normal monochrome subject on a red background. Viewed through the right blue-green eyepiece (which is exactly complementary in colour to the red stain on the picture) the latter will not appear at all. Due to the absorption of the filter there will be a sensation of blackness. The mechanical problems involved are (a) The complementary staining of the two records, and (b) Their projection.

The obvious method of approach will be to use the negative-positive process, and then to print the positive images 'left' record, 'right' record, alternatively down the length of the film. This might possibly be accomplished by using a variant of the type of printer which is employed in 'stretching' film when it is printed down from silent form (which normally runs at 16 pictures per second) to be made into sub-standard sound-film which normally runs at 24 pictures per second. By suitable mechanism the negative and positive materials are arranged to have two differing methods of progression so that certain of the frames in the negatives are printed from more than once, thus increasing by 50 per cent. the number of frames allotted to a given movement or action on the film.

Theory and Practice

Such a mechanism could be employed to print every frame of one of the negatives on alternate frame-spaces of the positive material. The positive could be run through the printer twice, using the two negatives, so that the two sets of records fitted into one another. Thereafter, the alternate frames could be stained with brush or roller in their complementary tints, or a revolving twin-colour filter could be synchronised with the passage of the film through the projector.

But this is all theoretical consideration, intended to make clear the working of the theory rather than to suggest a practical application of it. Another more accessible method exists and can be used if two friends will combine together to supply the necessary apparatus and to evolve the further simple mechanism required. It must be confessed that I have made only a few tentative experiments along the lines which I shall indicate, but already some exceedingly interesting and encouraging results have emerged.

The requirements of the method are (a) The 'left' and 'right' records on two separate films which can be reversal, negative-positive, originals or duplicates, and need not have been treated in any way. (b) The twin-coloured spectacles containing one red and one blue-green eyepiece. (c) Two projectors, and some means of synchronising the movements of the two projectors. (d) Two colour filters, one red and one blue-green, complementary to the elements of the eyepieces.

Viewing Through Filters

It will be obvious that, if one of the projectors is fitted with a blue-green filter and a film placed in it and projected, the film picture will at no time be observed by the viewer's eye which has the red spectacle glass in front of it. If, on the other hand, the red projection filter is placed on the front of the other projector and the other film run through this projector, it will readily be observed through the red spectacle glass.

If the 'left' film record is put through the left hand projector, which is fitted with a red projection filter, and the left spectacle lens is also red, then the left eye will be able to observe the correct record. A similar blue-green combination with the 'right' film record will result in the right eye of the observer seeing its correct picture. The problem now is to combine these two pictures.

This can be done by standing the two projectors side by side, and then running them in synchronism at the normal speed of 16 frames per second. In my own case I used two Filmo projectors, Model S, the motor of one of them providing the motive power, the motor of the other one being cut out by withdrawing the clutch, and drive transmitted from one to the other by a temporarily fitted flexible drive passing from one to the other. This drive was attached in each case to the knob which is provided on the front of the projector to enable the mechanism to be turned over, the shutter rotated and the film moved forward, either after threading or after operating the still picture device on this particular model.

Early Experiments

I do not know how the mechanism would stand up to long runs when modified in this way, but it seems sturdy enough to bear the extra strain, and certainly worked quite well for the short test runs which I made. A possibly better modification of the device would be to fit Meccano sprocket wheels and chain drive, to avoid any backlash due to torsion in the present flexible drive; but the chain drive would have to be turned through two right angles to avoid interference with the lens mechanism of the two projectors.

At first I projected my two pictures side by side, at a distance of only 8 feet, giving a pair of 18″ wide pictures. The objection to this method is that as you get farther from the screen, and the two pictures themselves get larger, they must be separated wider and wider, and your eyes are called upon to separate more and more. That is an unnatural condition, causing strain, as your eyes are

(*Continued on next page*)

Shots with plenty of sky usually make very attractive backgrounds for titles, but it should be noted that this one would not be entirely satisfactory for this purpose, since there are too many light patches against which white letters would be lost. Observe that the eye travels at once to the girl on the seat: the focal point of the composition.

accustomed to converge to a given degree according to the distance of the object which is being viewed. The amount of this convergence can be arrived at by extending two imaginary lines from the eye to a common point on the screen surface.

A little thought convinced me that it was not necessary to continue this state of affairs, and I thereupon trained my two projectors so that they covered an identical area of the screen, the two pictures completely overlapping. One point, of very great importance, which must be observed, is to ensure that the *heights* of the two projected images are identical, that is to say, a line drawn through identical parts in the two images must be truly horizontal. Otherwise there is considerable difficulty in securing stereoscopic vision and much strain.

Practical Stereoscopy

(*Continued from previous page*)

will observe a monochrome black picture on a green background. Appropriate complementary filters in gelatine form can be obtained from the well-known photographic manufacturers.

I have not gone very far with this method because another and better one exists. The superiority of this other process lies in the fact that the observer's eyes are not called upon to combine impressions received in

The young aviators. Low viewpoint has the effect of cutting out any unwanted background and contributes to the feeling of striving upwards.

If you thus converge the axes of the two projection lenses, the result on the screen, viewed without the spectacles, will be a jumbled mass of reds, blue-greens and dirty white, but viewed through the complementary spectacle glasses the whole thing falls into order. Let us see why.

An unilluminated screen will appear black. A red illuminated screen seen through the green spectacle glass will also appear black. Project on to this screen a picture which has been stained green and view it through the green spectacle lens, and the effect will be the same if a green-stained picture had been projected on to an otherwise unilluminated screen. In other words, the appropriate eye two colours, but that each of them sees the subject in its correct tone or tint, so that all effects from normal monochrome, through the range of tinted bases, right up to full colour photography, become available for this stereoscopic method. The process relies on polarisation of the light.

Light is the result of vibrations, and these vibrations occur at right angles to the direction of the ray, and in all possible directions, outwards and inwards. A convenient conception is of a cylindrical bar or tube which alternatively and rapidly puffs up and shrinks at any given point, the total effect at any one moment being similar to that of the armoured tubing used to connect the canister to the facepiece of the service respirator. Alternatively, if you could look directly down the length of a light ray, greatly enlarged, the effect would be of an outwards and inward movement through all the 360 degrees around a central spot.

Such light can be 'polarised.' That is, the vibrations in all directions but those contained within a single plane can be cut out. So our original tubular ray becomes a flat ribbon, or, if we look at the end of the ray as before, all vibrations except those at, say, 90 degrees and 180 degrees (i.e., in exactly opposite directions outwards from the centre of one plane) will be eliminated. A ray may be thus polarised in any other desired direction by appropriate placing of the polarising medium.

New Method of Polarisation

The earlier methods of polarisation were by reflection from a non-metallic surface (a comparatively inefficient and a somewhat inconvenient method), or by means of a so-called Nicol prism, which is severely limited as to aperture, and the fact that the crystal must be very long in relation to its width.

As the result of the work of E. H. Land, a new method is now available, in the form of Herapathite, a synthetic quinine-iodine compound, in the form of very small crystals carried in a viscous vehicle, which is extruded on to a glass support in such a manner that the axes of all the crystals are parallel. Each of the crystals acts as a separate polariser, and the total effect is of a flat polarising plate with a high percentage of accuracy.

If a polarising filter is placed in front of a light source, about 50 per cent. of the light will pass, but if this is again intercepted by another polarising filter *in the same plane*, there will be little additional loss of light, about 35 per cent. of the original light passing freely. On the other hand, if the second polarising filter is rotated so that its polarising plane is at right angles to the polarising plane of the first filter, only a little more than one per cent. of the original light is allowed to pass, and except in the presence of such brilliant sources as the sun, complete blackness is attained for all practical purposes.

The Polaroid Filter

It can thus be seen that if a projector is fitted with a polarising filter in a vertical plane and the light projected on to a screen which does not upset this polarisation, then another polarising filter used as a spectacle glass can be arranged either to pass the light or to eliminate it. If, for example, the 'left' record is projected through a vertical polarising filter, then the left spectacle glass of the observer must give vertical polarisation, while the right one must give horizontal polarisation. The observer will then see a picture through the left eye, and none through the right eye.

The polaroid filter is opaque to ultra-violet light, and is very transparent to infra-red ('crossed' polaroids make an excellent infra-red filter), but for practical purposes there is no selective absorption of other colours, and no distortion is apparent. For this reason the polaroid system lends itself particularly to the projection of stereoscopic records in full colour. In the next issue we will deal further with the practical application of this method to sub-standard stereoscopic cinematography.

SPOOL LOADING

OF all methods of clipping film to the core of the take-up reel, undoubtedly one of the most effective is that used in Kodak and Bell and Howell reels, where there are radial leaf springs set between the core and each side of the reel which grip the edges of the film. Merely by pushing the film end on to the core and wrapping up one full turn, tight take-up is assured. It should be noted that it is absolutely unnecessary to push the film end into the core slot with this type of reel: the slot exists primarily on account of the method of manufacture and is often too narrow to let the film pull out freely at the end of a reel, in which case sprocket holes get torn. It is astonishing how many operators fail to realise that the springs alone hold the film: often one sees them wilfully prolonging the change-over by struggling to get a twisted leader strip into the slot!

Incidentally, the fancy clips provided on some reels are *almost* as good as the Kodak method in the case of one's own privately used reels, but they most decidedly fail to stand up to library usage, as hirers know to their cost: if there is one thing that really *is* maddening, it is trying to fix the film to such a reel whose fancy clip is missing. For these unhappy circumstances carry a few inches of insulating tape in the projector box, and simply stick the film to the core.

SPECIAL EFFECTS

(BEING THE POLITE TRADE TERM FOR THE NEFARIOUS PRACTICE OF FILMIC DECEPTION)

1. General Principles

By GEORGE PELLINORE

Process work—split screen. George Arliss talks to George Arliss in G.B.'s "His Lordship."

THE scene is the London Zoo. A small boy stands, goggled-eyed before the giraffe's cage. He stares in awe at the yards of neck. "I don't," he eventually remarks, "believe it."

Perhaps it is fortunate for the human race as a whole that most of us are not like that small boy. In general, we are apt to suffer from the incurable habit of believing our own eyes. Any scientist will assure us that this is a most unjustifiable and even dangerous procedure, leading to all sorts of unwarranted results. Amongst which is, of course, the famous platitude, "the camera cannot lie." Clearly the scientific spirit burns strong in many camera users, for few platitudes can have been subjected to such continual and violent contradiction. It is our hope that this series of articles may foster and encourage that scientific spirit in the minds of even more camera users!

Three Types of Tricks

From a technical point of view nearly all camera tricks can be put under one or more of three main headings:

Distortion of time;
Staging;
Process work.

Let us consider each of these separately.

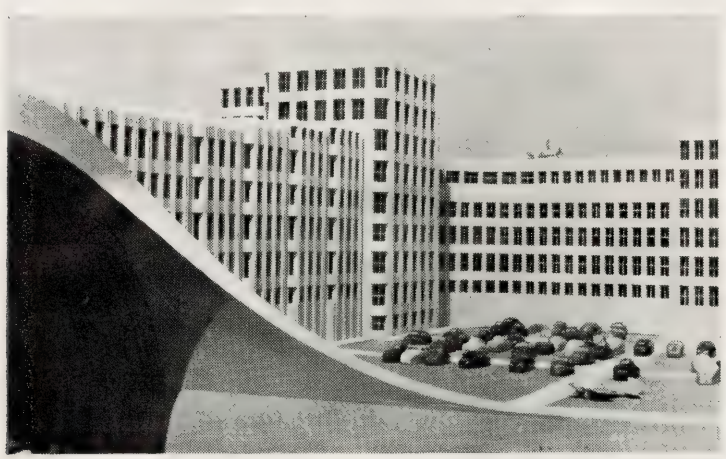
Distortion of time includes, of course, all slow-motion shots, with camera speeds varying from just above normal (16 or 24 pictures per second) up to several thousand pictures per second occasionally used for scientific work. It also includes all ultra-rapid motion shots, with camera speeds from just below normal to one picture every hour or so, used for plant photography. Shots run in reverse are a third form of time-distortion.

A fourth and most important form is everything that can come under the general heading of "animation." Animation is only possible because the gaps in filmic time between successive frames can be stretched indefinitely during the photographing process, and during these lengthened gaps, adjustments and alterations can be made to the objects being photographed. Thus animation really consists of a distortion of time.

Staging covers a great deal. It covers everything from the street opening in the "San Francisco" earthquake sequence to bullet holes appearing in a wall: everything from the vast forest fire in "The Blue Bird" to the model naval battles in "Convoy." Staging itself involves no form of camera trickery, but frequently various camera tricks are used in conjunction with staging. For example, slow-motion is used on model shots more often than not. Staging also makes use of the fact that all sizes on the screen are purely relative. Hence it is possible to make models appear full size, and to dwarf people by building large-scale furniture and sets.

Process work includes all photographic trickery. It includes such processes as back-projection and Dunning, travelling matte and split screen. Some processes such as glass shots and the Schufftan Mirror process lie somewhere between photographic trickery and staging. The Schufftan Mirror, for example, combines in effect two scenes on one film by a non-photographic process. It is chiefly with process work that these articles will be concerned.

Before going into detailed analyses of the various trick processes, it will be as well to emphasise a few general principles. When a conjurer is performing, he generally keeps up a light patter of talk, the sole purpose of which is to distract the audience's attention at the critical moment. An analogous device is made use of in film trickery—a device which can best be called "build-up."



An example of staging: A model shot from G.B.'s "The Tunnel."

The idea is to build up a sequence in such a way that the audience knows more or less what to expect before they see it. If then what they see is a process shot somewhat resembling what they expected, they will instantly accept it without further enquiry. But the process shot by itself might not get by, or might even fail to suggest anything at all. A single example will illustrate the principle.

Audience Uses its Imagination

Most readers will remember the terrific locust swarm sequence in "The Good Earth." There was one shot in particular in which the locusts settled on a field of waving corn. As they settled, the corn gradually became black, first at the far end, and then nearer and nearer. Now the audience had already been shown shots of real locusts, there was the noise of the swarming locusts on the sound track, and there had been much talk about locusts. Hence, on seeing a field of corn, they expected it to become black with locusts as they settled, and then seeing it *did* become black, they not unnaturally assumed they were seeing locusts settling.

Actually the shot was probably produced as follows: first a straight shot of the field of corn was taken. Then, without moving the camera, the whole field was sprayed with some black paint so that the corn appeared black. Some more footage of this was shot off. Then the first scene was slowly wiped, with a wobbly-edged but more or less horizontal wipe from top to bottom, into the second scene. Thus the field seemed to become gradually black—first in the distance near the top of the picture, then

(*Continued on next page*)

nearer and nearer as the wipe got further and further down the screen. Finally, some whirling dust or small beans was superimposed over the whole shot to give the effect of locusts in flight. The shot was completely successful, but its powerful effect was largely due to the right build-up beforehand.

Let us return to our three categories of film tricks. There is little that can be said here about distortion of time. Either you have the facilities for slow-motion, or you have not. Reverse shots on sub-standard can always be taken with extreme ease by turning the camera upside down. And animation and plant photography are both such big and specialised subjects that they would each require a complete set of articles to themselves to do them justice.

Most amateurs are in a position to do a little simple staging, but the more elaborate forms are quite beyond the resources of even the most opulent amateur societies. It would be difficult to write of staging at all completely : essentially it is a subject in which new methods must be devised as every new shot and new problem arises. Comparatively simple ideas like hanging miniatures and glass shots, staged car crashes and small fires will suggest themselves, but it will not be the purpose of these articles to go further into this branch of trickwork.

Another effective example of staging : An explosion in the tunnel. (From G.B.'s " The Tunnel." See also shot on previous page).

And so we come to process work. As was mentioned above, there are a number of distinct trick processes such as back-projection, Dunning, etc. But before we make a fuller study of these, a few words must be said about the most straightforward of all process work—double exposure.

Double Exposure

In film parlance, double exposure is the term used for exposing one length of film more than once in the camera. The same piece of film may, on occasion, be exposed two, three, four, or even more times, but whether it is exposed twice or six times, the process is still called " double exposure."

Now there is a general belief among some amateurs that if you take two pictures on top of each other on the same film or plate, you must give each half the normal exposure, and if you take three on top of each other, one-third the normal exposure. Let us state here, once and for all, that this is a complete fallacy.

The exposure given to each photograph should be that which is normal for the effect desired, regardless of how many photographs are being taken on the same piece of stock. We say " normal for the effect desired " advisedly, for the effect desired may be one that calls for what would be, according to meter readings, over or under-exposure.

For example, suppose we wish to shoot a ghost scene with a real old-fashioned transparent ghost. We would first of all shoot the room in which the ghost is to appear. This we would normally shoot at the meter reading, unless we wished to produce a night or twilight effect, in which case we might under-expose. Then on the same piece of stock we would shoot the player playing the ghost against black velvet. According to how strong and solid we wished our ghost to appear, so this exposure would be varied. Generally for a ghost one would probably shoot at about half the meter reading, or one stop down.

Now there is an alternative method of shooting a ghost scene which we had better describe because it has a bearing on the exposure given to each part of the scene. We would first of all shoot our room empty, and then, without moving the camera, we could shoot on the same length of stock our room plus the ghost. The first exposure of the room, in this case, would show through the ghost and make him transparent. Now in this method of shooting a ghost scene, the room receives exposure both times the film is run through the camera, but the ghost receives exposure only once.

Hence, when calculating the exposure for the room, the desired exposure must be split between the two runnings of the film. For example, suppose we wish to give the room the meter reading and the ghost half the meter reading. Then we would use one stop down from the meter reading for both parts of the scene, which would mean that the room would be exposed twice at half the meter reading and the ghost once at half the meter reading.

It should be noted that these two methods of creating a ghost produce different results and can be used for different effects. The first method enables solid people as well as ghosts to appear in the scene. Also the ghost in this method is completely transparent, in the sense that the wall of the room behind him will be just as clear and dense as at any other part of the room. But in the second method, the wall behind the ghost will get only one exposure instead of two, and therefore the ghost will have himself a certain density or opacity. Furthermore, only members of the phantom world can appear in the scene if it is shot by the second method.

Shooting Above Meter Reading

We have discussed several cases in which the exposures in double exposure shots are below the meter reading. Occasionally, however, it is desirable to shoot above the meter reading. An example of this is superimposed white-lettered titles. Here a little extra exposure on the title card will ensure that there is no ghosting of the background scene through the lettering. It may be worth mentioning—though it is a trifle obvious—that it makes not the least difference which scene is shot first in any double exposure scene.

Process work is sometimes carried out in the camera on the studio floor or on location, and at other times it is done later in the laboratory on a special type of printer known as an " optical printer." Some processes are essentially laboratory processes—e.g., travelling matte—others, such as Dunning, are partly laboratory and partly camera. But such processes as simple double exposure or split screen may be equally easily carried out in the printer or in the camera.

In the professional studio the tendency nowadays is to push as much process work as possible on to the laboratory. At one time all mixes were made in the camera. This necessitated either shooting the two scenes to be mixed immediately after each other, or alternatively canning up the first scene, undeveloped, together with accurate notes as to footages, etc., to be reloaded into a camera when the second scene was ready to be shot. Nowadays all mixes except those on titles are invariably made on the optical printer. Superimpositions (double exposure) are also nearly always done on the printer, and even split screen is frequently produced that way.

A Question of Cost

The reason is that all process shots require a great deal of time to produce when shot in the camera, and time in a film studio costs a deal of money. Optical printing may cost anything up to several pounds per foot, but even this price is likely to be cheaper than the salaries of stars, of numerous small part players, perhaps of a crowd of extras, of numerous technical staff, and lastly but not least, the hire of studio space.

However, from an amateur's point of view, time is not generally so important as the cost of a printer, and most amateurs will prefer to do what tricks they can in the camera rather than in the printer. Therefore, in ensuing articles, if a trick can be done by either method, the camera method will be described, and the printer only resorted to where the trick can be done by no other method, or where the camera method is so much more difficult as to rule it out.

PARTY GAME for THE SHELTER

Party game for the air raid shelter : name a salient characteristic of the film stars. The following will give you a lead : Jack Benny —cigars ; W. C. Fields—nose ; Marlene Dietrich—legs ; Harold Lloyd—glasses ; Charlie Ruggles—inebriation ; Dorothy Lamour—sarong ; Akim Tamiroff—strange make-ups ; and, of course, best known of all : Charlie Chaplin—baggy trousers. The idea is to specify the characteristic and invite the players to identify the actor or actress.

HUMOURS OF A.R.P.

Amateur films of any size, subject and gauge, may be sent for review. Those that reach a reasonable standard of merit are awarded a Leader. A special animated Leader is given for films that are particularly noteworthy. Please do not send us your film until we ask you to, but first advise us that you have a film you wish reviewed, stating its length and gauge. We will then reserve a date for screening it, and inform you accordingly. Please do not forget to enclose the cost of return postage with your film. Address: The Editor, "Amateur Cine World," 300/304, Gray's Inn Road, London, W.C.1.

By THE EDITOR

QUITE a lot was written in the early days of the war of the desirability of taking shots illustrative of the new conditions, with particular reference to A.R.P. work. Such shots were easier to take then than they are now ; the swift rush of events had not swept cine work into an almost exclusively indoor hobby.

Mr. F. Marshall, who recently sent us his film, "A.R.P., 1939" (2 reels, 16mm.) for review, may congratulate himself on the fact that he made it under reasonably favourable conditions. Even so, almost all of the shots composing it could be taken today, including those showing light blazing out from an unscreened window, for they were, of course, faked. There is no sign of haste or make-shift about the film ; it is indeed just such a production as one would expect from the amateur who gained two awards in the 1939 "Ten Best." And he still continues to make films, having finished two since "A.R.P."

Like all the Marshall films, this one is technically very sound and is illumined with piquant observation. One notices with pleasure for instance, the short sequence showing mother filling in the ration books. The ink runs out of the pen, and she has to fill it. Nothing much in that, you say ? True, there *is* nothing much in it—if there were it would be out of place, since it would draw attention to itself unduly. But it is human and revealing. It gives a distinctive touch to an otherwise prosaic incident. It is the sort of thing that often happens but is rarely noticed. But note that mother does not over-act and express extreme annoyance. The whole sequence is handled gently and naturally.

The film begins with the family trying on their respirators, but the sequence is a little stagey. One rather has the impression that the camera was set up by the settee, the people told to sit on the settee, act, get up and go out. Just like that. This is because the sequence is over-long and there is not quite enough variety for the length. Then again, people sitting down intent on doing something rarely look entirely natural on the screen. In real life they do not often 'stay put' for any length of time; they fidget, perhaps, make to get up now and again, and so on.

In a corner of the room is a radio set. Super-imposed on the speaker grille is a moving sub-title, rising upwards : "This country is now at war with Germany." The last line, "war with Germany," is repeated four times and then wiped off from left to right. Just before the repetition of the message a close shot of Mrs. Marshall looking up, scared, is faded-in and double-exposed on the scene. This shot continues until about two seconds before the sub-title finally disappears but before it is faded-out we have a double-exposed shot of hands lifting up and opening a book on A.R.P.

Coincident with the fading-out of the shot of mother, there is a fade-in of the children, also looking alarmed, but it fades-out before the shot of the A.R.P. instruction book, which latter is succeeded by a shot of a newspaper. Altogether there are five separate exposures super-imposed on this scene. An approximate effect could, of course, have been secured by direct cutting, but it would certainly not have been so forceful and dramatic.

Now follow shots of A.R.P. literature being studied, the making of black-out curtains, hanging them, splinter-proofing windows, filling in ration books, fitting up the basement as a gas-proof shelter. The last presented some difficulties because of the very limited space, precluding much variety of angle, but the author has solved the problem by keeping the shots short and ensuring that there was always plenty of action in them.

PUZZLE CORNER: No. 4

In "Pinocchio" and many other Walt Disney films there occur shots which give an amazing impression of depth and three dimensions. Most people know that these shots are shot on the "multiplane" camera cranes, and some of us are aware that different parts of the scene are different distances from the camera, just like stage scenery. But even granting this, why is it that such a strong impression of depth is created, and why can't this impression be created by accurate drawing on one single sheet of paper?

(Answer on page 226)

It should perhaps be noted at this stage that he tells us that nearly all of the amusing incidents in the film have their parallels either in his own experience or in that of his friends. The incident that is the highspot of the film (we deal with it below) was, for example, suggested by the fact that, like many others, his family slept through a raid, wakened at the "Raiders passed" signal—and got up and went to their shelter.

Mr. and Mrs. Marshall decide to try their hand at first aid, and, of course, it is father who has to take the part of the patient and consent to be enveloped in unlikely-looking bandages. It is while he is trussed up helpless on the floor that there is a thunderous knocking on the door. Wardens have arrived to complain that the curtains are not properly drawn. After a little tripping over trailing bandages (but no slapstick here) the wardens are eventually satisfied, but when they get outside, they are appalled to see a light blazing out of an upper window which is innocent of any blind or covering.

The black-out made the taking of these shots troublesome. The night shots of the wardens out of doors were taken in daylight with a Wratten A filter. Four photofloods in reflectors were switched on when they were three feet from them, the intention being to suggest a light being suddenly switched on through an uncurtained window. According to the meter reading the idea should have been successful, but compensated processing of Super XX levelled out the densities. Moral : if you do not want your film to receive compensated processing, be careful to indicate the fact on the carton.

Model work was resorted to for the shots of the exterior of the house with the light

(*Continued on next page*)

A *Novel Touch For Titles*

WIPE-MIXES are slick and satisfactory if not overdone (as most trailers prove) and ordinary lap-dissolves are satisfactory for slow-tempo sequences but *not* for titles (as some of the older Pathescope library films prove). There are, however, many unexplored methods of mixing, one of which is particularly satisfactory for titles. This method consists of irising-out the first title and wiping-in the second title vertically downwards. On the screen this is extremely neat in appearance, the first title being, as it were, gathered up while the second spreads downwards from the top of the frame. The eye of the audience naturally looks upwards to the top of the picture as the old title dwindles away, and there is the new one unfolding itself.

A fairly important secondary consideration, from the amateur's point of view, is the fact that precise timing of the overlap of the two shots is not essential : obviously it does not matter to within three or four frames at what point during the iris-out the wipe-on starts.

If an iris-out cannot be arranged, alternatives are a double-shutter wipe (when the sides of the picture close in) or an ordinary fade : in both cases a better result is obtained than the ordinary lap-dissolve, which is never satisfactory for titles unless done very quickly.

The cinematographer should also bear in mind special applications of the wipe-iris-mix, such as, for example, never completely closing the iris so that a detail of the first shot is held throughout the second. If this is used for thought flashes or the like, and the wiped-on shot is to be wiped-off again, continuity in wipe directions must be observed : thus, wipe-on downwards, then wipe-off downwards—in which case the picture appears from the top of the frame and disappears into the bottom of the frame. To wipe-on downwards then wipe-off upwards is disturbing. It need hardly be added that an iris can be had from a derelict still camera, and the wipes are done by a piece of black card.

shining forth. A doll's house was used, placed against a plain wall and dimly lit, a 25-watt lamp being hung inside it. The shots are short and very effective ; one has not time to examine them at all closely.

Now many of us would have been content to have had the wardens direct attention to the light from the lounge and then go away again. But the author introduces the unexpected and in so doing raises a hearty laugh. The audience believes the incident to be over—and is surprised and delighted to find that there is still worse to come. It is the element of the unexpected that gives sparkle and vitality to a film and holds the audience's attention. The light had been left on by daughter Muriel but she hears a rumpus of approaching wardens on the stairs, snaps it off, and is peacefully asleep when father stalks in. He walks out puzzled.

Father leaves the house for the office and

The almost complete darkness of the top and base of this shot throws the central feature into strong relief.

is accompanied part of the way by his small son who, on his return, picks up a whistle. Still idly sauntering along, he blows it lustily. At once mother dashes out, very agitated, and shepherds him into the house, from which he makes sundry erruptions to collect various toys. A number of planes are roaring overhead. These shots were taken at an air display some seven years ago, their indifferent quality providing striking evidence of the improvement in stock and processing since then.

Cook and the maid are in the kitchen out of which they rush to join mother and the two children in the shelter. Cook continues to read her novelette, now and again putting her fingers to her ears and screwing up her eyes. The maid knits phlegmatically ; there are only a few rows on the needles. Mother and the children play at "Monopoly." Morning wears on into the afternoon. There are clouds of steam in the kitchen. Cook has forgotten to turn off the oven taps.

Back to the shelter. Mother sits, cheek in hand, looking very dejected. Nairn, the small boy, seems quite perky. He has wiped out the other players. There is a large pile of paper 'money' in front of him. Mother eyes it disconsolately. One feels that some of her dejection may be due to the fact that she has been so thoroughly beaten at the game. There are several inches of knitting on the maid's needles.

Late afternoon, and father returns home. He is much perturbed to see smoke writhing out of door and window. This sequence caused some bother. After a good deal of experiment with smoke-producing mixtures, an A.R.P. practice smoke bomb was procured. The camera was set up outside the back door and the action rehearsed. Father was to break in and come out again, rubbing his eyes and pursued by wisps of smoke.

The bomb was ignited in a space about three feet square by nine feet high, and father gave it a minute or so before forcing his way in. As soon as he opened the door he was met by a wall of choking fumes and was beaten back, gasping and rubbing his eyes—but not in play. Ah, but what a fine chance to secure the real thing, for the camera was still turning ! But to no purpose. The doorway and the whole of the action was completely hidden by the smoke.

A few minutes later every window on that side of the house was belching out clouds of it. A few passers-by became alarmed, but the neighbours took no heed. They are used to Mr. Marshall's thorough-going filming activities and paid not the slightest attention, taking it for granted that shooting was proceeding according to plan. Some time before an ambulance had arrived to take away a tradesman who had been injured ; the films were thought to account for that, too.

The scenes were re-shot later, small chips from smoke bombs being used for both exterior and interiors. The camera operator was forced to wear a respirator, which gave a reasonable degree of protection, although it is not designed for use against this type of smoke. The effect would have been better had the exposure been one stop under, for the light smoke tends to kill the shadows.

Father, wearing his gas mask, bursts into the shelter. The family is, of course, scared at his appearance and at once assumes that gas bombs have been dropped. But everything is explained satisfactorily, father flourishing a newspaper which contains a story about a practice flight. (This item was printed in with Econsign stencils and looks most effective). It is a pity, however, that he is not quite strong enough for the part, for he fails to give the climax its full value, so that it tends to be glossed over.

The film could quite well end here, but instead we have another of those unexpected shots : emergency rations are seen on a cupboard shelf. A hand comes into the picture and takes them away. The end, and a neat and fitting end it is. A Leader has been awarded for the film.

CINE POT-POURRI

Systematic Splicing

A Sound Splice looks evenly black when the splicer is opened for momentary inspection. Iridescent "blisters" forebode a break in the projector ; to prevent them, the scraped film is wiped clear of dust and damp and then evenly but thinly moistened with cement and quickly clamped. After ten seconds, the pressure-plate is lifted for a quick examination and then replaced to maintain contact while the next splice is prepared.

After rough trimming, the leading end of the next shot is slightly tapered with sharp scissors. A quick wipe with carbon tetrachloride (or "Thawpit") removes any trace of grease, after which the film must be handled by its edges only.

It is inadvisable to coil a newly-spliced film tightly ; apart from the question of strain there is the necessity of evaporation.

Mechanics of Editing

Splicing ceases to be tedious when proper tools are available. Ask a chemist to mix one fluid ounce each of glacial acetic acid, acetic ether and amyl acetate, and to put up the mixture in three one-ounce bottles. This universal cement is best applied with a small camel-hair brush in a quill mount, which should be carefully washed and dried after each session. The splicing clamp must also be kept clean to avoid corrosion.

Pressure on a newly-made splice need not be great, but must be perfectly even. Squaring the faces of a splicer deformed by wear is a precision job ; an automobile engineer experienced in trimming contact-breaker points understands exactly what is wanted. He will need a specimen splice to gauge the thickness to be left between the two faces.

The Moving Camera

The moving camera is a subtle instrument, not to be blunted. Tracking back from a close-up is a mere annoyance unless lighting emphasises the surroundings at the expense of the characters and shouts " . . . but this is where they were ! " The function is to show the relationship between beginning and end shots. The panoram leaves one subject, already treated, to introduce another : a vertical tilt up the castle walls to the spectator on top must lead to the long-shot of the countryside with the man in the fore-ground.

Thus every worth-while moving camera shot begins and ends with a pause. If the linkage between the two ends has no real significance it saves money, time and trouble to resort to a plain cut.

Montage

Montage is something more than splicing together odd shots from odder angles. A true montage is a real sequence, differing from others only in being subjective instead of objective ; it is a sequence of impressions instead of actions.

If only one significant thought is to be conveyed, a single shot is the most effective : the idea that a man towers over his fellows needs (and will carry) on more than one well-chosen low-angle shot. Montage, on the other hand, declares that "This machine is beautifully made—and powerful ; wonderfully intricate—*and powerful* ; delicately controlled—AND POWERFUL."

This vast Indian village set, used in "Northwest Passage," is the largest single set on record. And—as you see here—it was burnt down.

Continuous Performance

In these notes on forthcoming and current professional releases, our contributor deals with "The Sea Hawk," "The Boys from Syracuse" "Northwest Passage," "Tom Brown's Schooldays" and "Night Train to Munich."

By B. G. D. SALT

HISTORY, so they say, repeats itself. During the last few years we have had numerous examples of this habit in the form of remakes of old films. We have had a new "Prisoner of Zenda," a new "Robin Hood," a new "Man in the Iron Mask" and a new "Captain Blood." And now we have a new "The Sea Hawk."

The fact that it is a re-make is not the only repetitive thing about this film. It appears that Queen Elizabeth, in the form of Flora Robson, made speeches about freedom and tyranny that are even more appropriate to England and Hitler in the 20th century than to England and Philip of Spain in the 15th.

This film, as a re-make, is true to type. A good film often appears even better through maturing in the memory, and a re-make has therefore a big handicap to compete with. Generally it is a little disappointing, and not infrequently, allowing for the gilding by age, is not up to the standard of the original. Such was the case with "The Hunchback of Notre Dame" and with "His Girl Friday" ("The Front Page"). Such is the case with "The Sea Hawk."

"The Sea Hawk" is great fun, if you like a swashbuckling story. But technically it is disappointing. In the old silent films they went to a lot of trouble over the models. They used whacking big ones—model galleys large enough to contain a couple of men to control them. And the result was convincing. The models in the new version were small, and, as usual, the water gives the show away. The water spray in the bow waves is very globular. One could discern drops that would be an inch or two in diameter if the boat had been full size. To a certain extent one can make the motion of waves approximately correct by the use of slow motion, but the nature of water spray cannot be disguised, and the only cure is to build models as large as is practicable.

Pleasing Straight Photography

Some of the straight photography is rather pleasing. The film contains some rather beautiful shots of maps with rippling water flowing over them. The idea is of no importance to the story, but it lifts the scenes out of the ordinary. There is an exquisite shot of a fight, done in shadows, in the throne-room. Incidentally one long-shot of the throne-room was a Schufftan Mirror shot. A wide soft line is just visible down the middle of the screen, above the actor's heads, where the model joined on to the full-sized set. In this same sequence there were also a number of shots in which ceilings had been introduced by means of painted glass.

History continues its monotonous habit with Universal's "The Boys from Syracuse." Believe it or not, but this is a re-make of Shakespeare. A sub-title informs us that it is after "A Comedy of Errors" . . . A long, long way after. The action takes place in Syracuse in the days of the ancient Greeks, where they apparently indulged in every modern convenience from taxis to blitzkriegs, and where the date of his birth does not prevent the quoting of Shakespeare! There are two pairs of twins, one pair played by Allan Jones, and the other by Joe Penner. This, of course, is where the fun comes in both from an entertainment and from a technical point of view.

A Wise Move

Technically, it was a wise move to have avoided showing both twins simultaneously most of the time. The first glimpse of all four of them together is of a shop, with two inside and two outside looking through the window. This was back-projection. It involved no special difficulties, because there was no question of accurate timing or synchronising movements. But towards the end of the picture we are treated to the most amusing spectacle of Allan Jones singing a duet with himself. This, of course, involves several other problems. It involves problems of sound as well as of picture.

From a sound point of view, the procedure would probably be as follows. One part of the song would be recorded. It would then be played to Allan Jones through headphones while he sang the second part of the song. This would either be recorded as a separate track, and the two mixed later, or his voice and the previously recorded track could be mixed directly. We now have a track of the duet, but no picture.

The next stage would be to shoot the picture of one of the two Allan Joneses. This would be done by "play-back" and post-sync. methods. The track of the duet would be played through a loudspeaker on the set, and Jones would mouth his lines to it. With a little practice this could be done with considerable accuracy, so that the track and picture could be run together without detection of the method used.

Intricate Back Projection

But still we only have one Allan Jones. The normal method of obtaining the two would be split screen—done in the printer so that post-sync. methods could be used on both halves. But in the shot in this film, one Allan Jones moves in front of the other, which eliminates the possibility of this method. Back-projection was probably used. This would entail synchronising the back-projection plate with the sound track and post-syncing the real Allan Jones to the track at the same time. A ticklish but not impossible task.

One other point worthy of mention is that there appears to be very little difference in quality between the real and the back-projected figure. This is probably due to the nice adjustment of focus half-way between the artist and the screen. It is a common fault in this type of shot to focus on the artist. It is far better to have both images slightly soft, but matching, than to have one dead sharp and the other visibly soft.

"Northwest Passage" is based on the first half of the book of that name. Produced and directed by King Vidor, it is an example of one of those films that America turns out occasionally, and can do extremely well when she tries. "Stagecoach" was the last

(*Continued on next page*)

example, and both films have in common the merit of exquisite exterior photography. "Stagecoach" contained some of the finest landscape photography ever seen in black and white. In "Northwest Passage" Sid Wagner and William Skall have produced some of the finest ever seen in colour. Technically the film is notable in that, with the exception of a few opening sequences, the film was made entirely on location. Here are no studio tricks, no spectacular sets or process shots. This is the real thing in the real place.

M-G-M have certainly spread themselves on this picture. Probably no other company would have attempted to shoot such a spectacular picture, hundreds of miles from Hollywood, in the wilds of Idaho. The picture contains the largest single set on record. An entire Indian village was built, and burnt down, for the film. It covered 10 acres, and every hut was accurate in every detail, both inside and out.

This set was larger even than the vast sets erected for "Intolerance" and "Ben Hur." But whereas those sets are to some extent still standing, and have been used many times since the production of the original pictures, M-G-M's Indian village is now charred fragments of wood! It was burnt to the ground during a fight sequence, and the firing, apparently done by the Rangers, was actually carried out by the famous "death piano." This is a system of electrical controls connected to a keyboard, so that any part of the set can be fired at any given moment by an operator at the keyboard.

One of Our Best Directors

"Tom Brown's Schooldays" is additional proof, if any were needed, that Robert Stevenson is one of the best directors that this country has ever turned out, not excepting Hitchcock. Stevenson has yet a very limited number of pictures to his credit, but yet they include "Tudor Rose," "Owd Bob" and "The Ware Case." These alone are enough to show that he is a director of exceptional ability in a variety of subjects. It is interesting to compare "Tom Brown's Schooldays" with that other public school picture, "Goodbye, Mr. Chips!" Both are excellent entertainment, but whereas the latter was nothing else, the former is both a fairly true picture of public school life of a past age, and what is more important, a true drawing of boys' characters.

When a biologist wishes to study the different effects of heredity and environment on human character, he takes a pair of twins and brings them up in different places. He knows that their similarities are due to identical heredities, and their differences to different environments. Amateurs who aspire to become directors of artists rather than of mere cameras should employ this method to learn direction. It is not enough to study the works of one man, however good a director he may be. That would only lead to imitations.

Instead, study the performances of various artists under the control of different directors. In this way it is to some extent possible to decide what is due to the artist and what to the director. Compare, for example, the performances of Victor McLaglen when directed by John Ford ("The Informer"), and when directed by almost anybody else. Compare Will Fyffe in "Owd Bob" with Will Fyffe in "For Freedom." And now compare Sir Cedric Hardwicke as Dr. Arnold of Rugby with Sir Cedric Hardwicke as Dr. Livingstone. A director shows his ability in this way, and in many little touches which differentiate his work from that of others.

Railway set built in perspective for "Night Train to Munich." (See story on this page)

Such a touch is seen in Tom idly waving his quill pen over a lighted candle flame, to wake up to the fact just in time. Study these points.

"Tom Brown's Schooldays" contains a number of shots in which painted glass and hanging miniatures have been used. One such is a high angle shot of a Rugby street. It will be good practice for budding special effects merchants to try and detect the others. What appears to be vast back-cloths in even vaster studios are not always so—they are frequently models or paintings only a few feet across and hung quite near the camera in front of the rest of the set!

"Night Train to Munich" (M-G-M) is a little disappointing. It is too obviously an imitation of "The Lady Vanishes," lacking Hitchcock's skill which made the latter picture a masterpiece. Made at Shepherds Bush, it was photographed by Otto Kanturek on Kodak "Plus X" stock, a stock considerably faster than the usual "Super X," but not claiming to be an ultra-rapid stock like "Super XX." Kanturek has used this stock in conjunction with an absolute minimum of light, producing in some cases some striking low-key photography.

The film contains one or two sets which are interesting because they were built in perspective. Examples are a concentration camp scene and one of the railway stations. (A still of the latter appears on this page). The nearest railway carriage, near which actors are standing, was built normally. But beyond that the carriages become shorter and shorter and smaller and smaller, being tapered away from the camera. Finally the engine was but a few feet long. The result was the effect of a long train in a comparatively short studio. The sole disadvantage of such sets is that they can only be shot from one angle, and that it is impossible to have actors in the more remote parts of the set.

(*Continued at foot of next column*)

An Easily-made Fading Glass

A FADING-GLASS is the simplest and, in many ways, the most satisfactory method of making an ordinary fade-in or fade-out; and one can be made for nothing (plus a little minor scrounging) as follows:—Obtain two pieces of glass about six inches long by two inches wide—cut, for example, from an old photographic plate. One of these is to be blackened in such a way that one end has an inch or so left clear, then it gradually darkens till the last inch of the other end is completely opaque. This is done quite easily, after a little practice, by means of Indian ink used in an ordinary scent-spray.

Protect the end to be left clear by covering with a strip of tissue paper with deckled edge (to prevent a sharp line where the blackening starts) and apply the spray first from a distance of about six inches, then nearer and nearer as the other end of the glass is approached. By judicious movement of the spray jet, uniform density of application across the width of the glass is achieved. In case of trouble, it is a matter of seconds to wash off the deposited ink and start again; but note that the glass must be perfectly dry, otherwise the applied spray tends to spread, and control is lost.

The Glass in Use

When the glass has been satisfactorily coated and allowed to dry, the other piece is laid on it and the two bound together all round the four edges with passe partout of good quality or, alternatively, self-adhesive cellulose ribbon.

To use the glass for a fade-out, the clear portion is held against the camera lens and when the fade is desired to start, the glass is slid across until the opaque end completely obscures the lens; and the reverse for a fade-in. Note that it is not satisfactory to leave the clear end un-bound, so that the glass can be slid right off the camera lens at the completion of a fade-in; there is a definite danger that stray light will catch the free end of the glass, and reflect into the lens, thereby causing a light line across the picture which ruins the shot.

To avoid this, the balance of the shot before or after the fade must be filmed through the clear part of the glass. A refinement in mounting the glass is to encase it in a cardboard rectangle of internal width equal to the external diameter of the lens; this serves as a guide during sliding, as well as a positive stop for the beginning and end of the fade.

LETTERS to the EDITOR

The Editor is always glad to hear from readers, but does not necessarily endorse the views expressed.

MOUNTAINEERING IN CORNWALL

SIR, I was struck with what appears to be a rather curious inversion in the very useful feature, "Practical Photographic Effects" (October issue). One is clearly shown how to make hilly country appear flat by tilting the camera, but I feel that, as far as the average amateur is concerned, the converse is more important. I should not think that there are many occasions on which one would find it necessary to flatten out a hill, because it is so easy to find open stretches of country, but it is quite frequently desirable to suggest difficult country when, in fact, it is really disappointingly flat.

Two years ago I made a holiday film in Cornwall, much of it consisting of a friend going for rambles, clambering up rocks, etc. While this gave *him* pleasure, there is not much in this kind of thing to interest an impartial audience, as I discovered from a previous film. It is true, as you have frequently pointed out, that a moving figure in a landscape is a focus of interest, but if there is much of that figure he has to be doing something, otherwise the audience rapidly tires of seeing him.

There is nothing much that one *can* do on aimless rambles, so to maintain interest I created an artificial situation in which my friend appeared to be performing remarkable feats as a climber. The resultant film even impresses him! By tilting the camera and getting him to act as though the going were difficult (e.g., bending forward so that he did not appear to be leaning backward in the tilted shots, clutching at tufts of grass, rock, etc.) it appears as though he is a pukka mountaineer, and I like to feel that in one shot, at least, the audience gets a thrill.

This is where he is seen in medium close shot, clutching at a ledge of rock, and looking behind him and downwards. Then follows a shot of the sea hundreds of feet below—a sheer drop. But this second shot was taken in quite a different location and without the slightest danger. I merely stood on the cliff top and shot down. The angle of the first shot was so chosen that the innocuous nature of the scene was not apparent. Actually he was only a few feet from sea level.

I also included some shots of his apparently slipping, rubble falling into the sea, etc., but these were not successful, so I cut them out. They looked faked, perhaps because they were not well enough done but also, I am convinced, because they were unexpected. An audience does not expect to meet with drama in a holiday film of this kind, and the question remains: What was the cameraman thinking of to film his friend in difficulties, instead of going to his assistance? I think this point should be borne in mind by amateurs when making films of this kind.

Castle Bromwich. J. YEATES.

ALUMINIUM SPOOLS WANTED

Sir,—I have been asked by Lord Beaverbrook to assist him in the collection of aluminium for aircraft production. The need is urgent and the difficulty in bringing supplies to this country is considerable. It occurs to me, as a 16mm. enthusiast, that very many people, like myself, are storing films on aluminium spools which could be dispensed with, if the same method were used as the case of 35mm. I am aware that in the latter case, split spools enable this to be done, but I have no doubt that your journal would be able to suggest some ingenious method by which the same end might be achieved. If I could enlist your help, I feel some very useful work could be done.

Regent Street, W.1. JOSEPH EMBERTON.

(Editor's Note: It is pleasant to be able to make a virtue out of what many patriotic readers might consider a necessity. One advantage of adopting the professional's method of spooling is the ease it gives in editing, it being a simple matter to roll up odd lengths. And nearly every amateur has a number of spools doing nothing but keep a roll of film in position. Some four years ago we published a description of a device for 'spooling without spools' and feel that this is an appropriate occasion to reprint a digest of it. If you doubt your ability to carry out the work yourself, a mechanic would do it for you for a few shillings.

Note how the leaves at the top of the picture hang nicely above the figures, helping to frame the shot, and contribute to the suggestion of relief already given by the back lighting.

An ordinary spool with one flange removed would not work. Most would collapse if one side were removed; the core in the centre of the spooled film would be so large as to reduce the solidity which is an essential feature of coiled films, and it would be most difficult to get the film away from the half spool.

These difficulties are overcome by a brass hub and flange-plate device. For 9.5mm. films the brass hub has a boss of sufficient diameter and thickness to accommodate the driving pin which is a feature of all 9.5mm. rewind spindles. The hub proper is $\frac{3}{8}$" long by $\frac{1}{2}$" diameter and the boss is of 1" diameter and $\frac{1}{4}$" thick, making the over-all length of the fitting $\frac{5}{8}$".

The best way of making this part is to turn it out of 1" brass rod by means of a lathe; but amateurs with a more modest engineering equipment may make the boss with hacksaw and file and "sweat" a $\frac{3}{4}$" length of $\frac{1}{2}$" diameter brass rod on to it by means of a soldering bit or blowlamp. Then drill through the centre of the hub and boss with a 15/64" twist drill so that it will fit the rewind spindle; and, finally, a slot must be cut in the edge of the boss to accommodate the driving pin. This is best done by drilling a 3/16" hole just inside the outer edge of the boss and then filing through the edge with a warding file, producing a U-shaped slot.

That completes the brass hub, which will be found to fit any 9.5mm. super-reel rewinder, whether fitted with spring stops or 'turn-down' stops.

The flange-plate is simply a Meccano 6" circular plate (Part No. 146), the centre hole of which must be enlarged with a $\frac{1}{2}$" drill so that it is a snug sliding fit over the hub.

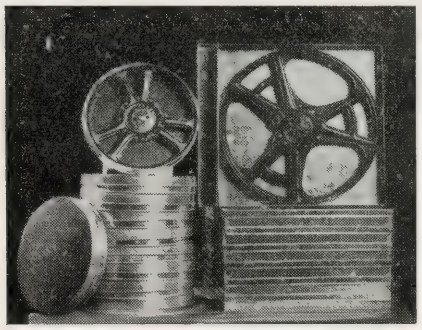
In the case of 16mm. rewinders there is no driving pin; but the spindles are square for approximately half their length and round for the remainder. To allow for this, secure a piece of $\frac{5}{8}$" diameter brass rod a shade less than $\frac{3}{4}$" in length and drill a 5/16" hole through its centre. Then get a 7/16" drill and enlarge the hole already made *for a distance of half an inch only*. The hub will now pass over the spindle of a 16mm. rewinder but will slip because the squared shank is able to revolve in the 7/16" diameter hole. To remedy this, get a disc of brass about the size and thickness of a worn halfpenny, drill a 5/16" hole in its centre and carefully file this into a square with 5/16" sides.

Having tested this disc over the square portion of the rewind spindle, it is then 'sweated' to the drilled-out brass rod, making sure that the end with the large hole is against the disc. 'Sweating' is accomplished by blowlamp or soldering bit, and great care is necessary to ensure that the square hole of the disc is perfectly centred with the hole through the rod, or hub as it now is. The overall length of the finished fitting should be $\frac{3}{4}$". The flange-plate is

(*Continued on next page*)

SPECIAL OFFER OF 9.5 M.M. REEL CONTAINERS

Owing to Metal Shortage only a limited supply available.



PRICES :

FOR 300-ft. REELS—
9d. each ... ... Postage 4d.
7/6 Doz. in Doz. lots ... ... Postage 10d.
Postage on Half-Dozen, 7d.
FOR 900-ft. REELS—
1/3 each ... ... Postage 6d.
12/- Doz. in Doz. lots ... ... Postage 1/-
Postage on Half-Dozen, 7d.

SHOP SOILED AND SECOND-HAND BARGAINS

PROJECTORS

Siemens 8-mm. H8, brand new condition, very slightly shop soiled, latest model ; list price £36 **£29 17 6**
Pathe Vox, £65 model, used on demonstration only **£50 0 0**
Model A 16-mm. Kodascope **£7 10 0**
Pathe 'H,' 9.5, built-in transformer. List £13. As new **£9 10 0**
9.5-mm. 200 B **£10 10 0**
9.5-mm. Coronet II **£7 0 0**
9.5-mm. Ace **£1 15 0**

CINE CAMERAS

8-mm. Emel Camera ; list £10 10s. ; show case used only **£8 17 6**
8-mm. Ditmar with built-in optical exposure meter ; list price £17 17s. ; absolutely new . . **£15 15 0**
Agfa Movex 8, cassette loading, very silent running ; list price £12 12s. **£7 0 0**
16-mm. BB Kodak, f/1.9 lens, with case ; list price £20 ... ... **£15 10 0**
16-mm. BB Kodak Jnr. ; list price £15, for **£7 17 6**
16-mm. Siemens Model B (latest), shop soiled only **£22 10 0**

ACCESSORIES

Ensign Multiflood lighting set on chromium stand, three reflector shades and two-way switch ; list price £4 12s. 6d. **£3 10 0**
Camera Craft Cine Pan Tripod ; list price £4 10s. shop soiled... ... ... **£3 15 0**
New carrying case for **D.A. Bolex** ... **£1 10 0**
A few chargers of **Pathe Ortho** film, including processing ... ... each **£0 4 6**
Bromide Gevaert post cards, various surfaces and grades 100 **£0 3 9**
70-mm. lens for Vox **£2 0 0**
40 x 30 matt white screen, Lumaplak light weight **£1 7 6**
A few second-hand 9.5-mm. 300-ft. empty reels each **£0 1 6**
New 200B or 200B Plus carrying cases each **£1 2 6**

SPECIAL NOTE :
We still have a few Sets of Extension Arms for 200B or 200B Plus. Complete with 2 900ft. Reels at 13/9 per Set. The Pathe Vox Sound Projector for 9.5. S.O.F. always in Stock, and the films now being released are better than ever. Now is the time to part Exchange your machine for a Vox while we still have Stocks.

Send P.C. for Library terms, 9.5 Silent and Sound.

Camera Craft LIMITED

446, GREEN LANES
PALMERS GREEN

Telephone : PALMERS GREEN 6828

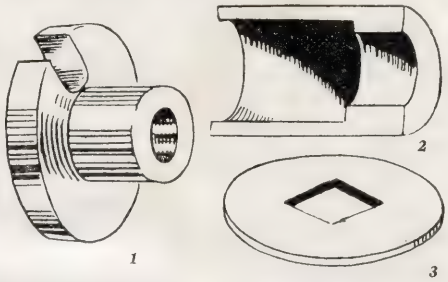
READERS' OPINIONS

(Continued from previous page)

Meccano part No. 146 as before, but in this case the centre hole must be enlarged to $\frac{5}{8}$" diameter to accommodate the hub.

By stipulating that the 7/16" clearance hole should extend for half an inch into the hub, one provides for those 16mm. rewinders which are adapted for rewinding 8mm. spools. In the case of an actual 8mm. rewinder, the making of the hub is very simple : merely a $\frac{3}{8}$" length of $\frac{1}{2}$" round brass rod drilled with a 5/16" hole, a V slot being filed along the length of the hole to accommodate the small projection which acts as a driving pin.

In use, the brass hub is first slipped on the rewinder spindle and then the circular plate goes on the hub. The film, which is already



1. BRASS HUB FOR 9.5mm. REWINDER ; 2. and 3. COMPONENTS OF 16mm. HUB (CORE SHOWN IN HALF SECTION.)

on a projector spool on the other arm of the rewinder, is connected to the brass hub by means of a clip. This clip need be nothing more than a strip of thin brass about $\frac{1}{4}$" wide and rather more than half the circumference of the hub in length (say, 1" for a $\frac{1}{2}$" hub and $1\frac{1}{4}$" for $\frac{5}{8}$" hub). In order that the clip shall grip the hub it should be first rolled round a blacklead pencil and then sprung over the hub.

When all the film has been spooled, the circular plate is drawn off the hub, leaving the latter on the rewinder, and the spooled film may be slid off the plate. The clip is removed from the centre of the film by pushing it out with a match-stick ; there will be no difficulty in replacing the inch or so of film which comes out with the clip.

When rewinding the coil of film on to the projector spool, if the core is too small to fit the hub the film must be placed directly on to the rewinder spindle after the circular plate (minus the hub) has been placed on the spindle. The film and plate will tend to revolve slightly eccentrically, but no difficulty will arise as long as rewinding is done at a moderate speed. In the case of 9.5mm. rewinders, the driving pin prevents the plate lying flush against the back disc and it is therefore advisable to 'pack' the spindle by means of a $\frac{1}{4}$" thick disc similar to the boss portion of the special hub).

A PRESSING NEED

Sir,—Here is a need in which some readers of your widely circulating journal may be able to assist. It comes from a soldier, who writes : "I shall be rejoining my unit which is stationed in an out-of-the-way village, and have no entertainments whatsoever, so I am taking a projector back with me, but am short of films. Would you know of anyone who would have any old ones they have finished with? The size is 9.5mm. I should be grateful for any amount and will send postage if anyone has a few reels they don't want."

No commendation of such an appeal is necessary, but it is clear that if any of your readers have any 9.5mm. stock, now no longer of use and interest to them, it could be used for the entertainment of men who at present get very little and that it would be very highly appreciated. I will gladly pass on to our correspondent the names and addresses of any who respond to his appeal.

H. H. WALKER
(Assistant Education Secretary).
National Council of Y.M.C.A., Inc.,
4, Great Russell St., W.C.1.

KEEP THE BULLETINS GOING

Sir,—Some time ago you published a letter from Mr. A. H. Green, of the Finchley A.C.S., in which he referred to his society's "unpretentious 'Monthly Circular'" which has appeared regularly for seven years. He also said that it would be interesting to hear from other society magazine editors as to their achievements in this field.

I think it a pity that no one troubled to reply, and I am wondering if this is because the war has caused most cine society magazines to cease publication. It would be most unfortunate if this were so, because now more than ever are they wanted.

I am now serving in H.M. Forces and it would be a great pleasure to me to be kept in touch with the best hobby in the world and the friends I made through it. A small bulletin or circular would do this very well. I am aware that many clubs have disbanded and that few are now actively engaged in production. My own club has gone out of existence, and its magazine with it. But in the case of many clubs, there are surely one or two members left who could produce such a circular from time to time.

It could not be filled with production notes, syllabuses of meetings and similar material, but it could deal with personalities, gossip about ex-members and people's experiences in cine work, and that is just the kind of thing that is wanted at the present time to help us keep in touch. It would also serve to keep the club alive.

SPR. M. R. OSWALD.

"MEN OF THE LIGHTSHIP"

Sir,—I notice that a Mr. Frank Webster has been complaining in a contemporary about a statement made in a criticism of "Men of the Lightship" published in your September issue. He says that he is moved to do so by 'acute disgust' at the statement that a wrong impression is given of the fate of the lightship's crew.

As to the acute disgustfulness of this statement I am not concerned. Mr. Webster is plainly entitled to his opinion (although one might be allowed to doubt if opinion that is swayed by such excessive emotion can have much value). What does call for comment is the fact that the emotional Mr. Webster lacked both the courage to communicate his views to the magazine that published the original criticism and the

elementary courtesy that should surely have suggested such a course, even though courage to carry it out be lacking. His standard of values is further nakedly exposed by his description of *Amateur Cine World* as a 'magazine which has some pretentions to taking the film, especially the amateur film, seriously.' How very childish and silly!

Mr. Webster states that 'it is time that a new standard was set for those who undertake the duties of film critics.' Before demanding a new one he should first learn the old one set down for those who criticise critics. It is founded on courtesy and breeding.

As a regular reader of *Amateur Cine World* from the first number, I know that you have never published furtive, backdoor criticisms of contemporaries, and will probably dismiss this matter with a smile and a shrug, but I hope you will publish this letter because, while the free expression of opinion should be encouraged in every way, it is in the interests of us all that debate should be as free as the air—but not as common.

I am sending a copy of this letter to the Editor of the magazine in which Mr. Webster's letter appeared.

Motspur Park. J. LEE RICHARDSON.

Round the Societies

Reports for the December issue should reach us not later than October 28th

A FILM show given by the Northern Branch of the Federation of Cinematograph Societies on Sept. 21st. in the Central Library, Manchester, attracted upwards of 60 Northern Society members from Lancashire, Yorkshire and Cheshire. The programme was an attractive one, most of the films being prize-winners in recent competitions. It consisted of :—

"Further Outlook Unsettled," by Mr. and Mrs. Day, Stoke-on-Trent A.C.S., 16mm., 300 ft. Kodachrome. I.A.C. silver medal winner; "Gone Away," by Mr. Butterworth, Salford C.S., 16mm., 400 ft. prize-winner in 1940 Scottish Amateur Film Festival; "Second Milestone," by A. Blamires, Barnsley & District A.C.C., 8mm., 200 ft. Kodachrome; "The Day Thou Gavest," by A. G. Greaves, F.R.P.S., Montague Pictures, 16mm., 800 ft., Certificate of Merit, R.P.S. First Prize in its class, Scottish Amateur Film Festival, 1936. Victor Saville Trophy for best film in above show; "Two Hours to Wait," by Mr. Bowyer, Stoke-on-Trent A.C.S., 16mm., 400 ft. Kodachrome, Hitchcock Cup, Scottish Amateur Film Festival, 1940; and "Vacation," by J. P. Robinson, Bradford Cine Circle, 16mm., 400 ft., Kodak SS Pan. (Filters Kod. Yellow C.K.2 and C.K.3., Red No. 28). First Place 16mm. and Tempest Cup, Bradford C.C. 1939 Competition.

* * *

Members of the **Polytechnic F.S.** (Hon. Sec.: A. C. Pierson, Northern Polytechnic, Holloway, N.7) recently went on location in the country to secure shots that could not be completed on a previous Sunday. But they spent more time in ditches—fortunately dry ones—hiding from dive bombers than they did in filming. The afternoon was a very exciting one, but inevitably the filmic results that were obtained were rather disappointing.

They had also begun work on the construction of the railway carriage set for the final scenes of the film, but, here again, have had to own themselves beaten for the time being. Other people in their shelter were not very keen on their sawing and planing wood down there, so they have had to come to the decision to postpone activities until more normal conditions make it possible to carry on.

As there is much of the film which must be taken outdoors under summer conditions, members are all very disappointed, for even if the situation improves, they will have to wait until next summer before the picture can be completed. Later they hope to be able to work on the interiors and on the titling, but sound recording will inevitably be held up.

* * *

The exigencies of the times have compelled the **Hyde C.S.** (Hon. Sec.: E. A. Schoolden, Edenhurst, 200, Dowson Road, Hyde, Cheshire) to revert to the practice of holding meetings on Saturday afternoons instead of evenings. Interest is still being maintained and a film competition has again been arranged, the closing date of which has been deferred until Oct. 30th. Any film, providing it has been shot during the last twelve months, is eligible for entry. Salford C.S. are to be asked if they will act as judges.

A good deal of organising and arranging was done in preparation for the Northern Branch Federation show and quarterly meeting, the projection and incidental music for which was this time left to the society.

* * *

Although the activities of **Summit Productions** (Hon. Sec.: K. Hunter, 7, Pensford Avenue, Kew Gardens, Richmond, Surrey) are practically at a standstill, every effort is being made to keep going. A party of evacuees was recently entertained by a programme of films consisting of the three of the club's recent productions and "The Green" and "Here, There and Everywhere," loaned by the National Savings Movement.

* * *

Although the **Planet A.F.S.** (Hon. Sec.: H. Roger Dale, 72, Wellington Road, Bush Hill Park, Enfield) is not at present doing any active work, the remaining members are continuing to meet on the first Sunday of each month at the above address. The society vacated its premises at 85, Green Lanes, last month, on expiry of the lease.

* * *

Ten members of the **Bradford Cine Circle** (Hon. Sec.: A. C. Whitehead, The Towers, Clayton, Bradford) made the trip to Manchester to see the show arranged by the Northern Branch of the Federation. The Hon. Sec. writes that they much enjoyed the show and considered it well worth the journey. They appreciated the opportunity of seeing films made by individual members of other clubs and which are not in the usual way seen by those outside the respective clubs.

PENROSE

MAIL ORDER SALES
BUY SAFELY AND CHEAPLY
FROM
THE CINEMA SPECIALISTS

PROJECTORS

9.5mm. Pathe Ace for 30/60 ft. films **£1 10 0**
9.5mm. Pathe Ace with 300 ft. films **£2 2 0**
9.5mm. Pathe Home Movie, cost £9 9 0 ... ... **£3 19 6**
9.5mm. Pathe 200B, several from **£10 10 0**
9.5mm. Specto, Several (not latest) **£12 0 0**
8mm. Dekko, latest, unused **£8 8 0**
8mm. Eumig PIII, 250 watt **£10 10 0**
9.5/16mm. Ditmar Duo, 500 watt, new **£32 10 0**
9.5 and 16mm. Bolex G.916, unmarked **£39 0 0**

TALKIE AND SOUND APPARATUS

9.5mm. Pathe Super Vox, shop-soiled **£72 10 0**
9.5mm. Pathe New Vox, now unobtainable **£65 0 0**
16mm. Gebescope A, cost £95, perfect **£39 0 0**
16mm. S.P. Wundatone, cost £105 **£35 0 0**
Record Playing Unit, 8 watt Decca amplifier, turntable speaker in 2 portable cases, equal new, cost £22 ... ... **£12 0 0**

ACCESSORY BARGAINS

Pathe Microphone, new, soiled **£4 4 0**
Ditmar, 900 ft. extension arms **£2 10 0**
Specto, 900 ft. extension arms **£1 10 0**
Pathe H, 900 ft. extension arms **12 6**
Penrose Titler, new, suit all cameras **£1 10 0**
Penrose Improved Titler, new list £3 3 0 ... ... **£2 0 0**
White Felt 1-inch letter fount 5 0
Ensign Inch Letter Sets 7 6
Cinecraft Title Drum, new, soiled **6 0**
Pathe 200 watt lamp, transformer **£2 10 0**
Ready Made Titles for 9.5, 8 and 16mm. ... ... **6d. & 9d. each**
Crystal Beaded 40 x 30 in. Hollywood Screens **£2 0 0**
Projection Lens for Ditmar, Bell Howell, Bolex **£4 4 0**
Celfix 50 x 40 Silver Screen, self-erecting. List £6 17 6... **£4 4 0**

PENROSE CINE LTD.
69, STREATHAM HILL, LONDON, SW2
PHONE: TULSE HILL 6756

FILM HIRE

Postal Service allows two days each way, without charge. Please order well ahead.

9.5mm. Supers	1/-	per reel	per two days
9.5mm. Sound films	4/-	,,	,,
16mm. 400ft. silent	1/6	,,	,,
16mm. S.O.F. films	3/6	,,	,,
8mm. 200ft. films	1/6	,,	,,

Lists and details free on request. Christmas Bookings slightly higher.

SELECTED BARGAINS

16mm. 400ft. films, per reel	£1	15	0
Gebescope Model A Talkie, with prism	£45	0	0
S.P. Standard 16mm. Talkie	£27	10	0
GeBescope Model K.16 Talkie ...	£67	10	0
Pathe 17.5mm. Talkie, complete ...	£21	10	0
Pathe 9.5mm. Vox Talkie, as new ...	£48	10	0
Filmosound 120, 1,200ft. arms, perfect	£120	0	0

AMATEUR CINE SERVICE LTD.

44, WIDMORE RD., BROMLEY, KENT.

Phone : RAVensbourne 0156. Close Wed. 1 p.m.

WANTED GOOD CINE APPARATUS

Silent and Talkie for Cash or Part Exchange

BEST PRICES GIVEN

Send full details now to

SHEFFIELD PHOTO Co. LTD.

6 NORFOLK ROW (FARGATE) SHEFFIELD

IMPORTANT

As readers are no doubt aware, copies of "Amateur Cine World" can only be supplied to order.

If your Newsagent or Photographic Dealer does not already have your order for "Amateur Cine World," please hand him this form TO-DAY.

Please reserve or deliver "Amateur Cine World" every month until further notice.

Name .....

Address .....

.....

.....

Australian 'Ten Best' Contest

FROM America, Japan, New Zealand and all the states of Australia came a total of 34 entries for the 1940 International Ten Best Competition organised by the Australian Amateur Cine Society. The results have just reached us. They included entries from such well-known 'internationals' as Fred C. Ellis, of America, and Tsukamoto, of Japan. That one or two international prize-winners did not figure higher in the list is ascribed to the fact that "they are older films, having been put together a year or two back, and however good the film of yesterday may be, the film of to-morrow brings along new ideas, new subjects and improved technique which help to turn the scales in favour of the very latest productions."

The first prize went to H. Roy Booth and Rex Cox (A.A.C.S.) for "Sunshine Over Sydney," a 16mm. documentary film in Kodachrome. The theme of it is that although there are clouds over Europe, there is sunshine over Sydney. New Zealand claimed the second prize with "All's Fair," by R. Bowie, an 8mm. film of an episode in the snow fields. "The Operation" (16mm., South Australian A.C.S.) a comedy of an operation performed on the wrong man, and "Dyeing," by Kato, of Japan (16mm. film showing the dyeing of fabrics by primitive methods) tied for third place. Fifth prize was won by Tsukamoto with "Mystery in the Forest," a former I.A.C. prize-winner. Special leaders were awarded for the remaining films.

About a thousand people attended the public presentation of the films at the State Conservatorium, Sydney, and there was also a repeat performance.

* * *

A social evening was enjoyed by all members of **Luxor Films** (Hon. Sec. : Aylwood Dares, 106, Hodford Road, Golders Green, London, N.W.11) recently. It included a film competition arranged for the visitors. Due to the numerous banshee wailings, club evenings have perforce been cancelled and work on the puppet film, "Strange Tactics," has come to a standstill because of lack of local support.

A meeting was held recently at which it was decided to do everything possible to maintain the projection section. Little publicity has been devoted to this side of the society's activities as more members were not required. The club has given many shows to hospitals and Service workers. However, the club is trying to evolve a solution to its problems and hopes to carry on. Interested readers who live within easy reach of Golders Green Tube Station should write to the Hon. Sec.

* * *

The opening show of the new session of the **Halifax C.C.** (Hon. Sec. : J. Corrigan, 8, Hill Top Avenue, Ainley Top, Huddersfield) was given at the club rooms early in October. The room was filled to capacity. Programme included I.A.C. prize-winning films. Machines used were a 750 watt Keystone and a 500 watt Bolex. The club has just issued a syllabus of forthcoming meetings. We are glad to see that arrangements have been made for meetings up to April 2nd, 1941.

DID YOU GUESS?

(Answer to Problem on page 219)

The effect of depth occurs only in what are known as "panning" shots, and in tracking shots. In cartoon parlance, a panning shot is one in which the drawings move past the camera from side to side or up or down, and does not necessarily produce the same effect as, in straight filming, panning on a stationary tripod. If you take a shot out of the window of a railway carriage while the train is moving, then the effect is *not* the same as panning across the same piece of countryside from a fixed tripod.

In the former case, objects near the camera will move rapidly across the field of view, objects further away more slowly, and objects in the extreme distance hardly at all. But in a shot from a stationary tripod all objects at all distances will move across the field of view at the same rate. It is by reproducing the former effect that the sense of depth in cartoons is created.

Various parts of the scene are put on different planes for convenience in panning them at different rates, though the same effect of depth *can* be created on one plane. By panning the drawings representing objects near the camera rapidly, and objects further away more slowly, a strong impression of depth is created. In tracking shots (which for this effect *must* be shot on different planes) drawings near the camera increase in size more rapidly than objects further away, and this also produces the effect of depth.

E. G. TURNER

SCREEN MAKER

20 page Catalogue Post Free 3d.

43-49 Higham St. Walthamstow E.17

Some Books to Help You in your Cine Photography!

TAKING! TITLING! PROJECTING!

Sound Film Reproduction *By J. F. Jones*
Explains how the mechanism of the "Talkies" works. *Price 4/- ; postage 5d.*

Film Play Production for Amateurs. *By G. H. Sewell.*
The author is well acquainted with the amateur film movement and has first-hand experience of making plays under amateur conditions. *Price 5/- ; postage 6d.*

The Home Cinema *By J. P. Lawrie*
Serves as an excellent introduction to amateur cine photography. *Price 3/6 ; postage 4d.*

Film Craft *By Adrian Brunel*
An epitome of the technique of film production. Every step, from the choice of subject to the final editing, clearly explained. *Price 3/6 ; postage 4d.*

Film Technique *By Pudovkin*
Pudovkin ranks with the greatest directors of the cinema and the influence of his pioneer work is found in every modern film. *Price 3/6 ; postage 4d.*

Amateur Films, Planning, Directing and Cutting *By Alex. Strasser*
This book does not deal with the photographic technicalities involved in amateur cinematography, but is a handbook of instructions for those who want to make a real film instead of a series of moving snapshots. *Price 7/6 ; postage 6d.*

Cine Photography for Amateurs. *By J. H. Reyner*
The third and revised edition, including chapters on exposure, lighting, projection, editing, trick effects and home talkies. *Price 12/-; postage 1/-.*

Movie-Making Made Easy *By William J. Shannon*
Second edition. A handbook for the amateur movie-maker. *Price 3/- ; postage 4d.*

Money-Saving Tips for Movie-Makers *By William J. Shannon*
Second edition. Practical hints on editing, projection and trick titles. *Price 3/- ; postage 4d.*

Amateur Movie Production *By William J. Shannon*
Second edition. A guide to the production of amateur photoplays. *Price 3/- ; postage 4d.*

How to Make Good Movies
A Kodak publication. *Price 10/6 ; postage 6d.*

The Complete 9.5-mm. Cinematographer *By Harold B. Abbott*
Deals fully and completely with amateur cinematography with a 9.5-mm. camera. *Price 5/- ; postage 6d.*

Professional Quality on Amateur Reversal Film *By P. C. Smethurst*
The latest and most comprehensive guide to exposing cine film. Photographically illustrated and with many diagrams. *Price 5/- ; postage 6d.*

Cine Titling Simplified *By Harold R. Abbott*
The author is an authority on titling and the book is a resume of a series of articles published on this subject. *Price 2/- ; postage 4d.*

Exposing Cine Film *By P. C. Smethurst*
Describes the author's method of ensuring correct exposure every time. *Price 2/- ; postage 4d.*

The Cinema as a Graphic Art *By Vladimir Nilsen*
Deals fully and authoritatively with film production for amateurs. *Price 15/- ; postage 6d.*

Amateur Movies and How to Make Them *By Alexander Strasser*
A "Studio" publication. 80 pages, fully illustrated. A book for beginners. *Price 7/6; postage 6d.*

Making Home Movies *By D. Charles Ottley*
An up-to-date handbook showing how successful pictures are made. *Price 3/6 ; postage 4d.*

Handbook on 8-mm. Cinematography *By Eric F. Impey*
Dealing exclusively with 8-mm. cameras and projectors. Well illustrated. *Price 2/6 ; postage 4d.*

Commercial Cinematography *By G. H. Sewell*
This book shows how cinematography is being used in business and how it is developing into a powerful and important factor in the modern industrial and commercial world. *Price 7/6 ; postage 6d.*

Make Your Own Movies *By Arthur Gale and King Fessels*
This book gives practical information about how to handle your camera, how to do simple tricks, how to use an exposure meter, how to splice and edit, indoor lighting, title making. *Price 15/- ; postage 6d.*

NOW READY! New list of Books on photography. Post Free.
Write for a copy to-day.

SANDS HUNTER'S
37 Bedford Street, Strand, London
Established 1874

Ideas for Educational Films

AND SOME NOTES ON THEIR PRODUCTION

THE Advisory Committee of the Scottish Film Council and the Scottish Educational Film Association have just issued their report on "The General Principles Governing the Production of Educational Films" (University of London Press, Ltd., 1s.). It might be thought that this is an inopportune time for the publication of such a report but, as the foreword points out, now, more than ever, the education of children is of paramount importance.

The work is divided into two parts: a statement of the principles that should guide both professionals and amateurs in the production of films for classroom use, and a list of subjects on which films are needed. As is to be expected, the amateur is counselled to make pictures of local civic and topographical interest—subjects of too limited an appeal to be a commercial proposition—but there are also many other most useful suggestions for films that yield more pleasure in the making.

There are two types of educational film: the direct teaching film and the "background" film. It is the latter, which approximates to the documentary, that is most suitable for amateur production. "It deals with subjects which may not find a place in the ordinary curriculum, but which teachers may feel should be part of the experience of their pupils." Thus, town children would be interested in a film of farming operations, country children in features of urban life.

Silent Films Preferred

Lack of suitable sound apparatus and its cost are by no means the only reasons why silent films are preferred for schoolroom use. One very cogent one is that a commentary tends to spoil the illusion of reality and that the film does not therefore make so deep an impression on the child as it should. The committee is strongly of the opinion that colour should be used wherever possible.

It is pointed out that any film, however short (ten minutes is given as the minimum for a background film should contain one main sequence, the core of the whole film, or, in certain cases, a group of very closely related sequences to form the core. For children of 5—7, shots should be of not less than five seconds' duration and not more than 15 seconds. They do not notice the very short ones and are bored by excessively long ones. Sudden changes in camera distance and angle should be avoided and very big close-ups should not be used; ordinary close-ups should be led up to carefully.

Verbal comments should be kept to a minimum, from eight to sixteen captions

(*Continued on next page*)

FILM LIBRARIES

• SILENT AND SOUND •

9.5mm. LIBRARY. Every film issued to date actually in stock including current month's releases.

HIRE RATES.—9.5mm. Sound Films, one night **3/-** per reel. Extra nights **1/-** per reel.

9.5mm. Silent Films. One night **1/-** per reel. Extra nights **3d.** per reel.

Sound films hired for use only on Pathescope VOX Projector. Silent films hired for use on sprocket-fed projectors only. Literature and order forms free for stamp. Pathescope Illustrated Film Catalogue containing full synopsis of all films available, price **6d.**, post 3d.

8mm. and 16mm. LIBRARY. Excellent selection of comedy and interest in both sizes. New films added as available. 8mm. hire rates **1/3** per reel one night, **3d.** per reel extra nights. 16mm. rate **2/-** per reel one night, **6d.** per reel extra nights. List of titles, catalogue of hire charges and order forms free for stamp.

9.5mm. SOUND & SILENT FILM EXCHANGE. Unlimited choice of Pathescope Catalogue. Full particulars for stamp.

SPECIAL NOTE. We do not issue lists of films in our 9.5mm. library. This is unnecessary as every film issued to date is in stock and full particulars of these may be obtained from the Pathescope Illustrated Film Catalogue 1940 edition. Price **6d.**, post 3d.

CHRISTMAS BOOKINGS
It is essential to book films for Christmas as early as possible. We already have a considerable number of programmes booked, and we expect to be fully booked up by December 10th. Films booked for Christmas Period will be dispatched on or before December 21st and are returnable December 27th.

HIRE RATES FOR CHRISTMAS PERIOD

9.5mm. Sound Films	...	5/- per reel
9.5mm. Silent Films	...	2/6 ,, ,,
9.5mm. 60ft. films...	...	8d. ,, ,,
30ft. films	...	4d. ,, ,,
16mm. Silent Films	...	4/- ,, ,,
8mm. Silent Films	...	3/- ,, ,,

SUBSCRIPTION SERVICE. Books of vouchers available from 25/-. One subscription covers all library services—hire of 8mm., 16mm. or 9.5mm. sound or silent films, also exchange of 9.5mm. sound or silent films.

KING TRAILERS (9.5mm.). Silent **1/-**, post 3d. Sound **4/6.**

"FIGHT FOR FREEDOM" FILMS issued to date include :—"Conquest of the Graf Spee," 200 ft., **25/-** ; "Our Navy in Action," 200 ft., **25/-** ; "Aerial Defence of Britain," 60 ft., **7/6** ; "The Bombing of Namsos," 30 ft., **3/9.** All "S.B." titles.

USUAL STOCKS of Projectors and Cameras including : Pathescope Super VOX, **£85** ; 200B Plus, **£18 10 0** ; "H," **£12** ; "ACE" **£2 10 0** ; Ensign Universal from **£35** ; also second-hand Kodak "C" 16mm., 100 watt, **£6** ; Kodak A, 250 watt, **£10 10 0** ; Pathe Home Movie with Lodex Lamp House (100 watt), with super attachment and resistance with motor drive, **£8** ; Pathescope "H" **£9** ; Ditmar Duo, 9.5mm./16mm. 500 watt, **£30** ; Bolex G.916, 500 watt, transformer built-in, **£45** ; Keystone motor-driven sprocket-fed 9.5mm., **£5 15 0** ; Pathe Kid and resistance, with super attachment, **39/6** ; "ACE" Super Attachment, **7/6** ; Eumig P.111, 250 watt, **£12 12 0.**

Please enclose postage when writing for literature or making enquiries.

J.G. KIRKHAM
SUBSTANDARD FILM SERVICE
115 · WINWICK RD.
WARRINGTON.

Specialists in Cine Apparatus, Films and Service. We will pay cash for 8mm. feature films, 9.5mm. sound or silent films or projectors. Telephone 245. Close half-day Thursday.

FILM LIBRARY

New lists of 9.5mm. Films now available, free. **Terms : 1/-** per reel for two nights, 4 reels **3/6**, 5 reels **4/6**, 6 reels **5/6.**

Special Bargains

Pathe "Vox" talkie, complete, new condition **£47 0 0**
Dekko, 9.5mm. projector with motor and S.A. **£5 5 0**
Pathe "Imp" with motor and S.A. Choice of three from **£4 16 0**

Write for full list of bargains to Mail Order Dept. D.

COLIN CAMPBELL
SIDCUP CINE SERVICE
246, BLACKFEN ROAD, SIDCUP, KENT
'Phone ELTham 3248
Bus No. 132 or 132a, for Eltham.

PATHESCOPE FILM LIBRARY

Hire the latest releases at 1/- per reel. TWO CLEAR DAYS. Postage extra. Cheaper rate for subscribers.

Send for lists and order forms.

The Cosmo Cine Service, 20, Church Lane, Brighouse, Yorks. Tel. 795.

CLASSIFIED ADVERTISEMENTS

Rates : For private adverts. 2d. per word (minimum 2/-); for Trade advertisements, 6d. per word (minimum 6/-). Box number 6d. extra. All Advertisements must be prepaid. The latest date for receiving small advertisements for the December issue is November 2nd.

TITLING

Personal. 9.5mm. Titles—Threepence. "Effects." Discount; Latest List. Evans, Cine-publicity, Dereham, Norfolk.

FOR SALE

8mm. Camera, Kodak, f/1.9 focussing; Combination case and filter. As new, £12. List £16 15 6. R. L. Hoult, Belmont, Menston, Leeds.

Paillard Bolex Camera, 16mm., fitted with f/1.4 Leitz Hektor speed lens. Full range of speeds. 8 to 24 frames. As new. **Automatic Threading,** complete with case, £60; also Cinecraft De Luxe Model Universal Title Maker, new, £4. See below.

Paillard Bolex Projector G.916, takes 16mm. and 9.5 films. This is a special model with 800 ft. arms, complete with case. As new. £60. Hardman's, 117, St. George's Road, Bolton.

9.5 Super-Vox, perfect, £68. Siemens Standard Projector, £39. Kodak 'Duo' f/4.5 Compur, 135/-. Offers considered. 30, Grove Coach Road, Retford.

1,600 ft. reels, new, 21/-; Humidor Cans 12/6; 400 ft. automatic 9½mm. reels (fit any machine—film doesn't lop off) 3/6; Humidor 9½mm./16mm. Cans 2/6.—Below.

200B Gorse Super Light Lenses, approx. 1" diam. glass, 300 per cent. more light, 37mm. 65/-; 50mm. 84/-; 3", 3½" or 4" (1½" glasses) £6 6 0.—Below.

Sensationally New—16mm. Universal Sound Projector, made by former Filmo engineers, 750 watt, 1,600 ft., 12" speaker, largest volume, two cases, new—£245.—Below.

Tripod, light, compact, automatic opening, pan-tilt-swing, strong, £5 5 0; Junior model for Pathe, etc., 35/-.—Below.

Ampro 16mm. Talkie, 750 watt model, 12" speaker, as new, mains transformer, £95.—Below.

16mm. Gaumont British Projector, 200 watt, as new, £95 for £35.—Gorse, 86, Accrington Road, Blackburn.

Published by Link House Publications, Ltd., 300/304, Grays Inn Road, London, W.C.1. Tel.: Terminus 2451. Printed by Arthurs Press Ltd., Woodchester, Stroud, Glos. Agents for Australia and New Zealand: Gordon & Gotch. Agents for South Africa: Central News Agency Ltd. (London Agents, Gordon & Gotch Ltd.) Printed in England.

being regarded as sufficient for a film of 400 ft. No caption should be longer than about sixteen words. Split captions (those separated by shots, the first being broken off in the middle of a sentence) are strongly deprecated. Each caption should stand alone, and although it need not be a complete sentence, it must not be related grammatically to others. With regard to length, the usual practice for children 10—12 is to allow three seconds, plus half-a-second for each word. Backgrounds and effects should be subordinate to the words and should never distract attention from them. Titles should not be facetious. It is desirable for main titles to be clearly explanatory. "Rubber," for instance, is not sufficiently specific. More suitable titles would be "Some Uses of Rubber" or "Rubber Plantations."

Truth of general impression is as important as accuracy of detail. "It would, for example, be wrong in a film on Scotland to give an excellent and accurate impression of the industrial area, but to give no idea of the vast expanses of peaceful and sparsely populated country which are also to be found; or in a film of sheep-shearing to show the shearing process divorced from all the colour and animation of the scene, with its excited dogs and busy men, so characteristic of sheep-shearing."

The first section of the report concludes with some advice that should be taken to heart by every amateur, whatever type of film he may be contemplating. The committee states that it is courting failure to attempt to make an educational film without having first prepared a scenario. The script should be rigidly adhered to, so that the cameraman is unlikely to be diverted from his purpose and include shots which are attractive in themselves but do not directly contribute to the theme, resulting in the available material dictating the final form of the film.

The list of subjects for films is headed by notes on films for the teaching of English. Now one might think that no silent film could be of much use in this respect, so that one is agreeably surprised to learn that almost every type of silent film can be used for that purpose. The most useful ones are those of description and exposition, e.g., "How a Zip Fastener Works" and "The Making of a Cart-wheel." When the child comes to write an essay on what he has seen he has to supply words to describe the pictures, and is not, as is so often the case, influenced by the words of teacher or book.

The historical film can have a dual purpose : it can provide a period background for literary works in addition to its obvious aim. Selected episodes from well-known books provide, therefore, suitable subjects for classroom films, since they help to convey the atmosphere and setting of the work and lead to a closer understanding of it. Typical examples given are the trial scene from "The Merchant of Venice" and the siege of the block-house in "Treasure Island." Such pictured episodes whet the appetite for more of the same story and encourage the child to read the whole work.

There is a demand for 'cameo' films—"a short film of, say, 100 ft. in which a central figure in action is set against the background of his period; e.g., the mediaeval knight or the yeoman." Other examples are the monk, the friar, the jesuit and the king and his council. Such films would be particularly useful in making historical characters live for younger children. For primary schools, dramatisations of nursery rhymes, fairy tales, incidents from the lives of popular heroes of childhood (King Arthur, Robin Hood, etc.) and scenic films as backgrounds to such poems as "The Lady of the Lake," "The Brook" and "The Daffodils" would be of great assistance to the teacher. The nursery rhyme films should preferably include some such device as the moving dot to assist rhythmical verse-speaking.

Films on physical education and hygiene are urgently required, both for children and adults. The scope is a tremendously wide one, an indication of some of its ramifications being detailed in the report which can be confidently recommended to the study of every amateur, whether he contemplates making educational films or not, for he will find in it much valuable advice on film technique and many stimulating suggestions for subjects.

Air Raid

(*Continued from page* 209)

the camera at 'slow motion' speed, while I jerked the webbing taut and threw up a miniature cloud of dust and brickbats. Then I seized the wall with one hand, and slowly produced a crack, while with the other hand I dropped showers of debris from above. Needless to say, this effect was rehearsed several times before it was shot.

The next sequence shows fire engines and ambulances careering along. One engine and two ambulances were made to serve (by intercutting) for at least half-a-dozen of each. Follows a shot of the guns slowly lowering ; then the empty sky ; next a close-up of the siren rotating, and finally an A.R.P. worker cycling round with an 'all clear' board. To slow down the tempo after the climax I cut in a number of shots, of fairly long duration, of the demolition site, interspersed with brief glimpses of casualties, and one shot of the smoking wreck of a plane silhouetted against a background of lowering clouds. This last was a cut-out filmed in the titler against a sunset photograph on the title board. Smoke was produced from an oil wick and the shot was filmed at 'slow motion' speed.

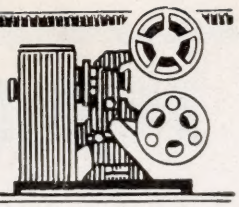
Then comes the end : a slow pan up the side of a wrecked house right up to clear sky, held for a moment, then slowly down past tree tops to a peaceful woodland scene ; a slow horizontal pan to bring a tree trunk bearing a notice into medium close-up. Tailpiece a close-up of a warning notice about "The Destructiveness of Rabbits." Fade out.

The planning and making of the film yielded many hours of absorbing work at negligible cost. One experiences a thrill on producing effects that quite astonish one's audience. Why not have a shot at a similar film yourself ?

MR. FRED PULLIN

It is with deep regret that we record the death of Mr. Fred Pullin, the first instalment of whose autobiography, "Confessions of a Film Editor," was published in last month's issue. Only a few days before his death he was discussing with the editor future articles. For our part we were very enthusiastic about them; they gave promise of an excellent series. Now, alas, they will never be written. We have a synopsis of the series, but only Mr. Pullin could have clothed the notes with his inimitable wit and shrewdness. His death is a loss to both amateur and professional film worlds.

DEALERS' REGISTER



That new SCREEN
CHEAPEST & BEST
STILL AVAILABLE
Stamp for details.
HEATHCOTE RADFORD ROAD, NOTTINGHAM

SOUND AND SILENT
9.5mm. LIBRARY
LATEST RELEASES AND ATTRACTIVE HIRE RATES.
FRANK E. JESSOP the Leicester Dealer
4, OXFORD STREET, LEICESTER

UNREPEATABLE OFFERS—NEW
16mm. Siemens C11, f/1.5 coupled r'finder £54 10 0
16mm. Siemens 'B', f/2.8, cassette loading £26 0 0
8mm. Agfa Movex, f/2.8, cassette loading £12 12 0
SECONDHAND. GUARANTEED.
16mm. Cine Kodak E, f/2.8 Micro fcsg., L. case £17 10 0
16mm. Agfa Movex, f/1.5 and 8cm. 3.5, L. case £20 10 0
16mm. Victor '5', f/2.9 Dallmeyer. Turret head £23 10 0
F. E. JONES 3, BREEZE HILL LIVERPOOL, 9 Tel.: WALTON 1129.

9.5 PROCESSING 1/-
PER 30 FT. FILM — PLUS RETURN POSTAGE
RELOADS Ortho 21° Sch. 2/8 or 23° Sch. 2/7 Pan Film 26° Sch. 3/3
CHARGERS TO FIT ALL 9.5 CAMERAS 2/- each
16mm & 8mm processing 3/- 50ft. & 2/- 25ft. plus post
E. H. JACKSON, Cinematograph Laboratory, 10, Cloth Market, NEWCASTLE - ON - TYNE, 1.

TODD TANKS for Processing your Films, or developing Titles.
Our London Manufacturers are still able to execute orders without much delay—but ORDER NOW.
PERSONAL PROCESSING SERVICE at standard charges.
Stamp is requested with correspondence requiring reply; please give fullest particulars when making enquiries re service or apparatus.
TODD'S, GRANGE, ERROL, PERTHSHIRE
Specialists in Processing Apparatus and Service

When replying to Advertisers,
please mention
"Amateur Cine World"

HOW YOUR LOCAL DEALER CAN HELP

On this page you will find the best place in your locality for buying cine apparatus. Most dealers stock all makes of cameras and projectors and are only too willing to give you demonstrations for comparison purposes. What is more important, your local dealer is always ready to answer any future queries you may have about the use or handling of the cine apparatus you have bought.

Do you know that almost everything under the sun can be bought, sold or exchanged quickly and easily through the Classified Advertisement columns of "The Exchange & Mart"? Over 7,000 Bargains are advertised in its pages every week.
The
EXCHANGE & MART
Every Thursday, 3d.
SPECIMEN COPY FREE
Send a postcard to-day for a Free Specimen Copy to:
A. C. BURT, 300-304, Gray's Inn Road, London, W.C.1.

JUST TO REMIND YOU that the LATEST manual on the Smethurst High-Light system of exposure is "Professional Quality on Amateur Reversal Film" written by the originator of the system, Mr. P. C. Smethurst. It explains in full detail the theory and practice of this revolutionary new method. All who use it should read the book, which costs 5/- from your newsagent or photographic dealer, or can be obtained direct from the Publisher, A. C. W. Burt, Link House, 300-304, Gray's Inn Road, W.C.1, for 5/6

BUY, PART-EXCHANGE, SELL, SERVICE or REPAIR YOUR PROJECTOR & CAMERA at:—
RANELAGH CINE SERVICES
28, Slater Street, Liverpool, 1
Customers wishing to purchase new Projector Lamps must hand in the metal cap off their old Lamp at time of purchase.
HIRE OUR 16 MM. S.O.F. EQUIPMENT WITH OPERATOR FOR YOUR PARTY, CAMP CONCERT, ENTERTAINMENT FOR WOUNDED SOLDIERS, ETC.

HIRE RATES FOR 9.5 FILMS
Cash with order. 1/- per reel hire, 4 reels 3/6, 5 reels 4/6, 6 reels 5/6, 7 reels 6/6.
Carriage paid one way on 4 or more reels. Films posted from us on a THURSDAY and received back first post TUESDAY morning are charged at 1/- per reel and as above. New films purchased as released. All films in first-class condition. Every film in Pathe's Catalogue available.
GORDON LOCK, Chantry Lane, Grimsby

TYPICAL of the big 'used' stock the Sheffield Photo Co. Ltd. have to offer
8mm. PROJECTORS
8mm. Eumig Projector, 250 watt. Mains Model. Optical framing. Complete with 250 volt, 200 watt lamp, and carrying case. Good condition £12 0 0
Specto 8mm. Projector, complete with DeLuxe carrying case. As new £14 0 0
9.5mm. PROJECTORS
9.5mm. Pathescope "H" Projector. Complete with Transformer and carrying case £10 10 0
16mm. PROJECTORS
Paillard G916 Projector. Resistance model for 16mm. and 9mm. Complete with all accessories and 4 O.B.T. shutter. Splendid condition £38 10 0
Write now—for complete list. Postage 2½d.
SHEFFIELD PHOTO CO. LTD.
6 NORFOLK ROW (FARCATE) SHEFFIELD

for all NEW & USED HOME CINE & TALKIE EQUIPMENT
G. E. BECKETT & Co.
77 & 79, OXFORD ROAD
MANCHESTER, 1.
Tel: ARD. 1001. Part Exchange

10/- REWINDERS. Exceptional offering in 9.5mm., 16mm., 17.5mm. and 35mm. Large Reels for 9.5mm., 16mm. and 17.5mm. at bargain prices.
20/- FILMS, 17.5mm. Cartoons, Pathetones, drama, comedies. 20/- brings film and big list of other subjects. Big selection 9.5mm. films.
30/- SOUND FILMS, 16mm. D.I.N. 30/- brings sample and lists of other subjects. Several S.M.P.E. 16mm. films at bargain prices.
40/- OPTICAL SYSTEMS for 9.5mm., 16mm. or 35mm. Photo-electric cells for talkies, 36/-.
TALKIE, 16mm. Bargain. Personal caller's opportunity, £24 cash. No offers. Projectors in every size from 30/-. All 9.5mm. parts stocked.
ILLUSTRA ENTERPRISES
159, WARDOUR STREET, LONDON, W.1.
Telephone: Gerr. 6889.

MAKE BETTER FILMS

—THESE USEFUL BOOKS WILL TELL YOU HOW!

EXPOSING CINE FILM

By P. C. SMETHURST. Tells how to get *even exposures every time.* Like the others in the series, it is so written that it can be understood by the veriest beginner.

Revised edition.

2/- (By Post 2/2)

IDEAS FOR SHORT FILMS

By ALEX. STRASSER. Translated by P. C. SMETHURST. *"A most valuable book which should teach the student a great deal about the skilled art of creating imaginative shorts."*—Andrew Buchanan.

2/6 (By Post 2/8)

CINE TITLING SIMPLIFIED

By HAROLD B. ABBOTT. Mr. Abbott has compiled a complete and authoritative manual on titling, written in easy-to-understand style and rich in practical data and tables. *Revised edition.*

2/- (By Post 2/2)

TRICK EFFECTS WITH A CINE CAMERA

By H. A. V. BULLEID. Most amateurs are familiar with simple tricks such as reverse and stop-motion. Practically every trick that can be carried out by an amateur is clearly described.

Revised edition.

2/- (By Post 2/2)

You can obtain these AMATEUR CINE WORLD handbooks from all booksellers, bookstalls and cine dealers—or by post from the publisher A. C. BURT, LINK HOUSE PUBLICATIONS, 300/304, GRAY'S INN ROAD, LONDON, W.C.1.

SEND P.C. FOR THE FREE 32-PAGE CATALOGUE OF BOOKS ON HOBBIES, HANDICRAFTS, HOME FOOD PRODUCTION ETC., ETC.

Digitization and post-production completed in the University of Wisconsin-Madison's Department of Communication Arts, with funding from the Columbia University Libraries.

Thank you to Dino Everett for his support in sharing this magazine online.

MEDIA HISTORY

DIGITAL LIBRARY